Sequence Listing

<110> Genentech, Inc.
         Watson, Dan L.
         Filvaroff, Ellen
         Gerritsen, Mary E.
         Goddard, Audrey
         Godowski, Paul J.
         Grimaldi, Christopher J.
         Gurney, Austin L.
         Watanabe, Colin K.
         Wood, William I.

SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
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Asn Ile Ala Ala Val Leu Cys Ile Ala Thr Ile Tyr Val Arg Tyr
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Lys Gln Val His Ala Leu Ser Pro Glu Gln Asn Val Ile Ile Lys
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Leu Asn Lys Ala Gly Leu Val Leu Gly Ile Leu Ser Cys Leu Gly
                95   100   105

Leu Ser Ile Val Ala Asn Phe Gln Lys Thr Thr Leu Phe Ala Ala
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His Val Ser Gly Ala Val Leu Thr Phe Gly Met Gly Ser Leu Tyr
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Cys Gly Val Ser Ala Leu Ser Met Leu Thr Cys Ser Ser Val Leu
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Tyr Ile Arg Asp Phe Gln Lys Ile Ser Leu Arg Val Glu Ala Asn
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Val Thr Phe Ala Phe Ser Cys Thr Met Phe Glu Leu Ile Ile Ile
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Glu Ile Leu Gly Val Leu Asn Ser Ser Ser Arg Tyr Phe His Trp
                65   70   75

Lys Met Asn Leu Cys Val Ile Leu Leu Ile Leu Val Phe Met Val
                80   85   90

Pro Phe Tyr Ile Gly Tyr Phe Ile Val Ser Asn Ile Arg Leu Leu
                95   100   105

His Lys Gln Arg Leu Leu Phe Ser Cys Leu Leu Trp Leu Thr Phe
                110   115   120

Met Tyr Phe Phe Trp Lys Leu Gly Asp Pro Phe Pro Ile Leu Ser
                125   130   135

Pro Lys His Gly Ile Leu Ser Ile Glu Gln Leu Ile Ser Arg Val
                140   145   150

Gly Val Ile Gly Val Thr Leu Met Ala Leu Leu Ser Gly Phe Gly
                155   160   165

Ala Ala Lys Cys Pro Tyr Thr Tyr Met Ser Tyr Phe Leu Ala Asn
                170   175   180

Val Thr Asp Thr Asp Ile Leu Ala Leu Glu Arg Arg Leu Leu Gln
                185   190   195

Thr Met Asp Met Ile Ile Ser Lys Lys Lys Arg Met Ala Met Ala
200   205   210

Arg Arg Thr Met Phe Gln Lys Gly Glu Val His Asn Lys Pro Ser
215   220   225

Gly Phe Trp Gly Met Ile Lys Ser Val Thr Thr Ser Ala Ser Gly
230   235   240

Ser Glu Asn Leu Thr Leu Ile Gln Gln Gln Val Asp Ala Leu Glu
245   250   255

Glu Leu Ser Arg Glu Leu Phe Leu Glu Thr Ala Asp Leu Tyr Ala
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Thr Lys Glu Arg Ile Glu Tyr Ser Lys Thr Phe Lys Gly Lys Cys
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Phe Asn Phe Leu Gly Tyr Phe Phe Ser Leu Tyr Cys Val Trp Lys
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Thr Asp Pro Val Thr Arg Gly Ile Glu Ile Thr Val Asn Tyr Leu
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Gly Ile Gln Phe Asp Val Lys Phe Trp Ser Gln His Ile Ser Phe
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Ser Asn Val Ile Val Leu Leu Leu Ala Gln Ile Met Gly Met Tyr
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395   400   405

Tyr Arg Thr Ile Ile Thr Glu Val Leu Gly Glu Leu Gln Phe Asn
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Ser Ile Gln Val Ser Cys Arg Ile Met Gly Ile Thr Leu Val Ser
           35                  40                  45

Lys Lys Ala Asn Gln Gln Leu Asn Phe Thr Glu Ala Lys Glu Ala
           50                  55                  60

Cys Arg Leu Leu Gly Leu Ser Leu Ala Gly Lys Asp Gln Val Glu
           65                  70                  75

Thr Ala Leu Lys Ala Ser Phe Glu Thr Cys Ser Tyr Gly Trp Val
           80                  85                  90

Gly Asp Gly Phe Val Val Ile Ser Arg Ile Ser Pro Asn Pro Lys
           95                 100                 105

Cys Gly Lys Asn Gly Val Gly Val Leu Ile Trp Lys Val Pro Val
          110                 115                 120

Ser Arg Gln Phe Ala Ala Tyr Cys Tyr Asn Ser Ser Asp Thr Trp
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Thr Asn Ser Cys Ile Pro Glu Ile Ile Thr Thr Lys Asp Pro Ile
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8

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Pro Thr Thr Thr Pro Pro Ala Pro Ala Ser Thr Ser Ile Pro Arg
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Arg Lys Lys Leu Ile Cys Val Thr Glu Val Phe Met Glu Thr Ser
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Thr Met Ser Thr Glu Thr Glu Pro Phe Val Glu Asn Lys Ala Ala
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Phe Lys Asn Glu Ala Ala Gly Phe Gly Gly Val Pro Thr Ala Leu
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Leu Val Leu Ala Leu Leu Phe Phe Gly Ala Ala Ala Gly Leu Gly
                245   250   255

Phe Cys Tyr Val Lys Arg Tyr Val Lys Ala Phe Pro Phe Thr Asn
                260   265   270

Lys Asn Gln Gln Lys Glu Met Ile Glu Thr Lys Val Val Lys Ala
                275   280   285

Glu Lys Ala Asn Asp Ser Asn Pro Asn Glu Glu Ser Lys Lys Thr
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                20   25   30

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                35   40   45

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                50   55   60

Thr Gln His Lys Leu Arg Ser Ala Val Glu Glu Met Glu Ala Glu
                65   70   75

Glu Ala Ala Ala Lys Ala Ser Ser Glu Val Asn Leu Ala Asn Leu
                80   85   90

Pro Pro Ser Tyr His Asn Glu Thr Asn Thr Asp Thr Lys Val Gly
                95   100   105

Asn Asn Thr Ile His Val His Arg Glu Ile His Lys Ile Thr Asn
                110   115   120

Asn Gln Thr Gly Gln Met Val Phe Ser Glu Thr Val Ile Thr Ser
                125   130   135

Val Gly Asp Glu Glu Gly Arg Arg Ser His Glu Cys Ile Ile Asp
                140   145   150

Glu Asp Cys Gly Pro Ser Met Tyr Cys Gln Phe Ala Ser Phe Gln
                155   160   165

Tyr Thr Cys Gln Pro Cys Arg Gly Gln Arg Met Leu Cys Thr Arg
                170   175   180

11

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        200   205   210

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        215   220   225

Leu Leu Phe Pro Val Cys Thr Pro Leu Pro Val Glu Gly Glu Leu
        230   235   240

Cys His Asp Pro Ala Ser Arg Leu Leu Asp Leu Ile Thr Trp Glu
        245   250   255

Leu Glu Pro Asp Gly Ala Leu Asp Arg Tyr Pro Cys Ala Ser Gly
        260   265   270

Leu Leu Cys Gln Pro His Ser His Ser Leu Val Tyr Val Cys Lys
        275   280   285

Pro Thr Phe Val Lys Ser Arg Asp Gln Asp Gly Glu Ile Leu Leu
        290   295   300

Pro Arg Glu Val Pro Asp Glu Tyr Glu Val Gly Ser Phe Met Glu
        305   310   315

Glu Val Arg Gln Glu Leu Glu Asp Leu Glu Arg Ser Leu Thr Glu
        320   325   330

Glu Met Ala Leu Gly Glu Pro Ala Ala Ala Ala Ala Ala Leu Leu
        335   340   345

Gly Gly Glu Glu Ile
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<211> 1395
<212> DNA
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aaacaaacaa acaaaaagat tttattaaag atattttgtt aactc 1395

2100 10
2111 501
2112 PRT
2113 Homo Sapien

400 10
Arg Thr Arg Gly Arg Thr Arg Gly Gly Cys Glu Lys Val Pro Ile
1   5   10   15

Asn Thr Ser Cys Asn Pro Thr Ala His Leu Val Asn Ser Ser Lys
              20   25   30

Pro Gly Leu Met Cys Val Phe Gln Gly Tyr Ser Ser Lys Gly Leu
              45   40   45

Ile Gln Arg Ser Val Phe Asn Leu Gln Ile Tyr Gly Val Leu Gly
              50   55   60

Leu Phe Trp Thr Leu Asn Trp Val Leu Ala Leu Gly Gln Cys Val
              65   70   75

Leu Ala Gly Ala Phe Ala Ser Phe Tyr Trp Ala Phe His Lys Pro
              80   85   90

Gln Asp Ile Pro Thr Phe Pro Leu Ile Ser Ala Phe Ile Arg Thr
              95   100   105

Leu Arg Tyr His Thr Gly Ser Leu Ala Phe Gly Ala Leu Ile Leu

13

Thr Leu Val Gln Ile Ala Arg Val Ile Leu Glu Tyr Ile Asp His
                125   130   135

Lys Leu Arg Gly Val Gln Asn Pro Val Ala Arg Cys Ile Met Cys
                140   145   150

Cys Phe Lys Cys Cys Leu Trp Cys Leu Glu Lys Phe Ile Lys Phe
                155   160   165

Leu Asn Arg Asn Ala Tyr Ile Met Ile Ala Ile Tyr Gly Lys Asn
                170   175   180

Phe Cys Val Ser Ala Lys Asn Ala Phe Met Leu Leu Met Arg Asn
                185   190   195

Ile Val Arg Val Val Val Leu Asp Lys Val Thr Asp Leu Leu Leu
                200   205   210

Phe Phe Gly Lys Leu Leu Val Val Gly Gly Val Gly Val Leu Ser
                215   220   225

Phe Phe Phe Phe Ser Gly Arg Ile Pro Gly Leu Gly Lys Asp Phe
                230   235   240

Lys Ser Pro His Leu Asn Tyr Tyr Trp Leu Pro Ile Met Thr Ser
                245   250   255

Ile Leu Gly Ala Tyr Val Ile Ala Ser Gly Phe Phe Ser Val Phe
                260   265   270

Gly Met Cys Val Asp Thr Leu Phe Leu Lys Phe Leu Glu Asp Leu
                275   280   285

Glu Arg Asn Asn Gly Ser Leu Asp Arg Pro Tyr Tyr Met Ser Lys
                290   295   300

Ser Leu Leu Lys Ile Leu Gly Lys Lys Asn Glu Ala Pro Pro Asp
                305   310   315

Asn Lys Lys Arg Lys Lys
                320

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15

a 1901

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Cys Leu Cys Gly Ser Ala Pro Cys Ile Leu Cys Ser Cys Cys Pro
                20                 25                 30

Ala Ser Arg Asn Ser Thr Val Ser Arg Leu Ile Phe Thr Phe Phe
                35                 40                 45

Leu Phe Leu Gly Val Leu Val Ser Ile Ile Met Leu Ser Pro Gly
                50                 55                 60

Val Glu Ser Gln Leu Tyr Lys Leu Pro Trp Val Cys Glu Glu Gly
                65                 70                 75

Ala Gly Ile Pro Thr Val Leu Gln Gly His Ile Asp Cys Gly Ser
                80                 ?                  90

Leu Leu Gly Tyr Arg Ala Val Tyr Arg Met Cys Phe Ala Thr Ala
                95                 100                105

Ala Phe Phe Phe Phe Phe Phe Thr Leu Leu Met Leu Cys Val Ser
                110                115                120

Ser Ser Arg Asp Phe Arg Ala Ala Ile Gln Asn Gly Phe Trp Phe
                12?                13?                135

Phe Lys Phe Leu Ile Leu Val Gly Leu Thr Val Gly Ala Phe Tyr
                140                145                150

Ile Pro Asp Gly Ser Phe Thr Asn Ile Trp Phe Tyr Phe Gly Val
                155                16?                165

Val Gly Ser Phe Leu Phe Ile Leu Ile Gln Leu Val Leu Leu Ile
                170                175                180

Asp Phe Ala His Ser Trp Asn Gln Arg Trp Leu Gly Lys Ala Glu
                185                190                195

Glu Cys Asp Ser Arg Ala Trp Tyr Ala Gly Leu Phe Phe Phe Thr
                200                205                210

Leu Leu Phe Tyr Leu Leu Ser Ile Ala Ala Val Ala Leu Met Phe
                215                220                225

Met Tyr Tyr Thr Glu Pro Ser Gly Cys His Glu Gly Lys Val Phe
                230                235                240

Ile Ser Leu Asn Leu Thr Phe Cys Val Lys Val Ser Ile Ala Ala
                245                250                255

Val Leu Pro Lys Val Gln Asp Ala ??? Trp Asn Thr Gly Leu ???
                260                265                270

Gln Ala Ser Val Ile Thr Leu Tyr Thr Met Phe Val Thr Trp Ser
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16

Ala Leu Ser Ser Ile Pro Glu Gln Lys Cys Asn Pro His Leu Pro
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         305   410   315

Glu Thr Gln Trp Trp Asp Ala Pro Ser Ile Val Gly Leu Ile Ile
         320   325   330

Phe Leu Leu Cys Thr Leu Phe Ile Ser Leu Arg Ser Ser Asp His
         335   340   345

Arg Gln Val Asn Ser Leu Met Gln Thr Glu Glu Cys Pro Pro Met
         350   455   360

Leu Asp Ala Thr Gln Gln Gln Gln Gln Glu Val Ala Ala Cys Glu
         365   370   375

Gly Arg Ala Phe Asp Asn Glu Gln Asp Gly Val Thr Tyr Ser Tyr
         380   385   390

Ser Phe Phe His Phe Cys Leu Val Leu Ala Ser Leu His Val Met
         395   400   405

Met Thr Leu Thr Asn Trp Tyr Lys Pro Gly Glu Thr Arg Lys Met
         410   415   420

Ile Ser Thr Trp Thr Ala Val Trp Val Lys Ile Cys Ala Ser Trp
         425   430   435

Ala Gly Leu Leu Leu Tyr Leu Trp Thr Leu Val Ala Pro Leu Leu
         440   445   450

Leu Arg Asn Arg Asp Phe Ser
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(212) DNA
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(400) 13
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tccatgctt ctctgcgcaa tatccattcc atcacccca cacaactcat 200
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17

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    Gln Ser Ser His Ala Ser Leu Arg Asn Ile His Ser Ile Asn Pro
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    Thr Gln Leu Met Ala Arg Ile Glu Ser Tyr Glu Gly Arg Glu Lys
                    35   40   45

    Lys Gly Ile Ser Asp Val Arg Arg Thr Phe Cys Leu Phe Val Thr
                    50   55   60

Phe Asp Leu Leu Phe Val Thr Leu Leu Trp Ile Ile Glu Leu Asn
                65   70   75

Val Asn Gly Gly Ile Glu Asn Thr Leu Glu Lys Glu Val Met Gln
                80   85   90

Tyr Asp Tyr Tyr Ser Ser Tyr Phe Asp Ile Phe Leu Leu Ala Val
                95   100   105

Phe Arg Phe Lys Val Leu Ile Leu Ala Tyr Ala Val Cys Arg Leu
               110   115   120

Arg His Trp Trp Ala Ile Ala Leu Thr Thr Ala Val Thr Ser Ala
               125   130   135

Phe Leu Leu Ala Lys Val Ile Leu Ser Lys Leu Phe Ser Gln Gly
               140   145   150

Ala Phe Gly Tyr Val Leu Pro Ile Ile Ser Phe Ile Leu Ala Trp
               155   160   165

Ile Ala Thr Trp Phe Leu Asp Phe Lys Val Leu Pro Gln Glu Ala
               170   175   180

Glu Glu Glu Asn Arg Leu Leu Ile Val Gln Asp Ala Ser Glu Arg
               185   190   195

Ala Ala Leu Ile Pro Gly Gly Leu Ser Asp Gly Gln Phe Tyr Ser
               200   205   210

Pro Pro Glu Ser Glu Ala Gly Ser Glu Glu Ala Glu Glu Lys Gln
               215   220   225

Asp Ser Glu Lys Pro Leu Leu Glu Leu
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<213> Homo Sapien

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tgctcctgct actggccctg gggcctgggg tgcagggctg cccatccggc 200

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<213> Homo Sapien

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                20   25   30

Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr
                35   40   45

Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe
                50   55   60

Glu Asn Gly Ile Thr Met Leu Asp Ala Gly Ser Phe Ala Gly Leu
                65   70   75

Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser
                80   85   90

Leu Pro Ser Gly Val Phe Gln Pro Leu Ala Asn Leu Ser Asn Leu
                95   100   105

Asp Leu Thr Ala Asn Arg Leu His Glu Ile Thr Asn Glu Thr Phe
                110   115   120

Asn Gly Leu Arg Arg Leu Glu Arg Leu Tyr Leu Gly Lys Asn Arg
                125   130   135

Ile Arg His Ile Gln Pro Gly Ala Phe Asp Thr Leu Asp Arg Leu
                140   145   150

Leu Glu Leu Lys Leu Gln Asp Asn Glu Leu Arg Ala Leu Pro [?]
155   160

Leu Arg Leu Pro Arg Leu Leu Leu Leu Asp Leu Ser His Asn Ser
170   180

Leu Leu Ala Leu Glu Pro Gly Ile Leu Asp Thr Ala Asn Val Glu
185   195

Ala Leu Arg Leu Ala Gly Leu Gly Leu Gln Gln Leu Asp Glu Gly
200   205   210

Leu Phe Ser Arg Leu Arg Asn Leu His Asp Leu Asp Val Ser Asn
215   220

Asn Gln Leu Glu Arg Val Pro Pro Val Ile Arg Gly Leu Arg Gly
225   230   235

Leu Thr Arg Leu Arg Leu Ala Gly Asn Thr Arg Ile Ala Gln Leu
240   250

Arg Pro Glu Asp Leu Ala Gly Leu Ala Asn Leu Gln Glu Leu Asp
260   265

Val Ser Asn Leu Ser Leu Gln Ala Leu Pro Gly Asp Leu Ser Gly
275   280   285

Leu Phe Pro Arg Leu Arg Leu Leu Ala Ala Ala Arg Asn Pro Phe
290   295

Asn Cys Val Cys Pro Leu Ser Trp Phe Gly Pro Trp Val Arg Glu
300   305

Ser His Val Thr Leu Ala Ser Pro Glu Glu Thr Arg Cys His Pro
310   315   320

Pro Pro Lys Asn Ala Gly Arg Leu Leu Leu Glu Leu Asp Tyr Ala
325   330

Asp Phe Gly Cys Ser Ala Thr Thr Thr Thr Ala Thr Val Pro Thr
335   340

Thr Arg Pro Val Val Arg Glu Pro Thr Ala Leu Ser Ser Ser Leu
345   350   355

Ala Pro Thr Trp Leu Ser Pro Thr Ala Ala Ala Thr Glu Ala Pro
360   365

Ser Pro Pro Ser Thr Ala Pro Pro Thr Thr Gly Pro Val Pro Pro
375   380   385

Pro Gln Asp Cys Pro Pro Ser Thr Cys Ala Asn Gly Gly Thr Cys
410   415   420

His Leu Gly Thr Arg His His Leu Ala Cys Leu Cys Pro Glu Gly
425   430   435

Phe Thr Gly Leu Tyr Cys Glu Ser Glu Ile Gly Ile Gly Thr Arg
440   450

Pro Ser Pro Thr Pro Val Thr Pro Arg Pro Pro Arg Ser Leu Thr
455   460   465

22

Leu Gly Ile Glu Pro Val Ser Pro Thr Ser Leu Arg Val Gly Leu
    470   475   480

Gln Arg Tyr Leu Gln Gly Ser Ser Val Gln Leu Arg Ser Leu Arg
    485   490   495

Leu Thr Tyr Arg Asn Leu Ser Gly Pro Asp Lys Arg Leu Val Thr
    500   505   510

Leu Arg Leu Pro Ala Ser Leu Ala Glu Tyr Thr Val Thr Gln Leu
    515   520   525

Arg Pro Asn Ala Thr Tyr Ser Val Cys Val Met Pro Leu Gly Pro
    530   535   540

Gly Arg Val Pro Glu Gly Glu Glu Ala Cys Gly Glu Ala His Thr
    545   550   555

Pro Pro Ala Val His Ser Asn His Ala Pro Val Thr Gln Ala Arg
    560   565   570

Glu Gly Asn Leu Pro Leu Leu Ile Ala Pro Ala Leu Ala Ala Val
    575   580   585

Leu Leu Ala Ala Leu Ala Ala Val Gly Ala Ala Tyr Cys Val Arg
    590   595   600

Arg Gly Arg Ala Met Ala Ala Ala Ala Gln Asp Lys Gly Gln Val
    605   610   615

Gly Pro Gly Ala Gly Pro Leu Glu Leu Glu Gly Val Lys Val Pro
    620   625   630

Leu Glu Pro Gly Pro Lys Ala Thr Glu Gly Gly Gly Glu Ala Leu
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Pro Ser Gly Ser Glu Cys Glu Val Pro Leu Met Gly Phe Pro Gly
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Pro Gly Leu Gln Ser Pro Leu His Ala Lys Pro Tyr Ile
    665   670

<110> 17
<111> 1672
<112> DNA
<113> Homo Sapien

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23

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<210> 18
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<212> PRT
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<400> 18
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            20   25   30

Glu Ser Leu Asp Ser Lys Thr Thr Leu Thr Ser Asp Glu Ser Val
            35   40   45

Lys Asp His Thr Thr Ala Gly Arg Val Val Ala Gly Gln Ile Phe
            50   55   60

Leu Asp Ser Glu Glu Ser Glu Leu Glu Ser Ser Ile Gln Glu Glu
            65   70   75

Glu Asp Ser Leu Lys Ser Gln Glu Gly Glu Ser Val Thr Glu Asp
            80   85   90

Ile Ser Phe Leu Glu Ser Pro Asn Pro Glu Asn Lys Asp Tyr Glu
            95   100   105

Glu Pro Lys Lys Val Arg Lys Pro Ala Leu Thr Ala Ile Glu Gly
            110   115   120

Thr Ala His Gly Glu Pro Cys His Phe Pro Phe Leu Phe Leu Asp
            125   130   135

Lys Glu Tyr Asp Glu Cys Thr Ser Asp Gly Arg Glu Asp Gly Arg
            140   145   150

Leu Trp Cys Ala Thr Thr Tyr Asp Tyr Lys Ala Asp Glu Lys Trp
            155   160   165

Gly Phe Cys Glu Thr Glu Glu Glu Ala Ala Lys Arg Arg Gln Met
            170   175   180

Gln Glu Ala Glu Met Met Tyr Gln Thr Gly Met Lys Ile Leu Asn
            185   190   195

Gly Ser Asn Lys Lys Ser Gln Lys Arg Glu Ala Tyr Arg Tyr Leu
            200   205   210

Gln Lys Ala Ala Ser Met Asn His Thr Lys Ala Leu Glu Arg Val
            215   220   225

Ser Tyr Ala Leu Leu Phe Gly Asp Tyr Leu Pro Gln Asn Ile Gln
            230   235   240

Ala Ala Arg Glu Met Phe Glu Lys Leu Thr Glu Glu Gly Ser Pro
            245   250   255

Lys Gly Gln Thr Ala Leu Gly Phe Leu Tyr Ala Ser Gly Leu Gly
            260   265   270

Val Asn Ser Ser Gln Ala Lys Ala Leu Val Tyr Tyr Thr Phe Gly
            275   280   285

Ala Leu Gly Gly Asn Leu Ile Ala His Met Val Leu Val Ser Arg
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Leu

<210> 19
<211> 1508
<212> DNA

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aaaaaaaa 1508

<210> 20
<211> 519
<212> PRT
<213> Homo Sapien

<400> 20

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            20                  25                  30

Tyr Ile Phe Ile Thr Gly Cys Asp Ser Gly Phe Gly Asn Leu Ala
            35                  40                  45

Ala Arg Thr Phe Asp Lys Lys Gly Phe His Val Ile Ala Ala Cys
            50                  55                  60

Leu Thr Glu Ser Gly Ser Thr Ala Leu Lys Ala Glu Thr Ser Glu
            65                  70                  75

Arg Leu Arg Thr Val Leu Leu Asp Val Thr Asp Pro Glu Asn Val
            80                  85                  90

Lys Arg Thr Ala Gln Trp Val Lys Asn Gln Val Gly Glu Lys Gly
            95                  100                 105

Leu Trp Gly Leu Ile Asn Asn Ala Gly Val Pro Gly Val Leu Ala
            110                 115                 120

Pro Thr Asp Trp Leu Thr Leu Glu Asp Tyr Arg Glu Pro Ile Glu
            125                 130                 135

Val Asn Leu Phe Gly Leu Ile Ser Val Thr Leu Asn Met Leu Pro
            140                 145                 150

Leu Val Lys Lys Ala Gln Gly Arg Val Ile Asn Val Ser Ser Val
            155                 160                 165

Gly Gly Arg Leu Ala Ile Val Gly Gly Gly Tyr Thr Pro Ser Lys
            170                 175                 180

Tyr Ala Val Glu Gly Phe Asn Asp Ser Leu Arg Arg Asp Met Lys
            185                 190                 195

Ala Phe Gly Val His Val Ser Cys Ile Glu Pro Gly Leu Phe Lys
            200                 205                 210

Thr Asn Leu Ala Asp Pro Val Lys Val Ile Glu Lys Lys Leu Ala
            215                 220                 225

Ile Trp Glu Gln Leu Ser Pro Asp Ile Lys Gln Gln Tyr Gly Glu
            230                 235                 240

Gly Tyr Ile Glu Lys Ser Leu Asp Lys Leu Lys Gly Asn Lys Ser
            245                 250                 255

Tyr Val Asn Met Asp Leu Ser Pro Val Val Glu Lys Met Asp His
            260                 265                 270

Ala Leu Thr Ser Leu Phe Pro Lys Thr His Tyr Ala Ala Gly Lys
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Asp Ala Lys Ile Phe Trp Ile Pro Leu Ser His Met Pro Ala Ala
290   295   300

Leu Gln Asp Phe Leu Leu Leu Lys Gln Lys Ala Glu Leu Ala Asn
305   310   315

Pro Lys Ala Val

<210> 21
<211> 1849
<212> DNA
<213> Homo Sapien

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<213> Homo Sapien

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            20   25   30

Gly Phe Leu Leu Gly Glu Val Lys Gly Glu Ala Lys Asn Ser Ile
            35   40   45

Thr Asp Ser Gln Met Asp Asp Val Glu Val Val Tyr Thr Ile Asp
            50   55   60

Ile Gln Lys Tyr Ile Pro Cys Tyr Gln Leu Phe Ser Phe Tyr Asn
            65   70   75

Ser Ser Gly Glu Val Asn Glu Gln Ala Leu Lys Lys Ile Leu Ser
            80   85   90

Asn Val Lys Lys Asn Val Val Gly Trp Tyr Lys Phe Arg Arg His
            95   100   105

Ser Asp Gln Ile Met Thr Phe Arg Glu Arg Leu Leu His Lys Asn
            110   115   120

... ... Asp Leu Val Phe Leu Leu Leu
            125   130   135

Thr Pro Ser Ile Ile Thr Glu Ser Cys Ser Thr His Arg Leu Glu
            140   145   150

29

His Ser Leu Tyr Lys Pro Gln Lys Gly Leu Phe His Arg Val Pro
155   160   165

Leu Val Val Ala Asn Leu Gly Met Ser Glu Gln Leu Gly Tyr Lys
170   175   180

Thr Val Ser Gly Ser Cys Met Ser Thr Gly Phe Ser Arg Ala Val
185   190   195

Gln Thr His Ser Ser Lys Phe Phe Glu Glu Asp Gly Ser Leu Lys
200   205   210

Glu Val His Lys Ile Asn Glu Met Tyr Ala Ser Leu Gln Glu Glu
215   220   225

Leu Lys Ser Ile Cys Lys Lys Val Glu Asp Ser Glu Gln Ala Val
230   235   240

Asp Lys Leu Val Lys Asp Val Asn Arg Leu Lys Arg Glu Ile Glu
245   250   255

Lys Arg Arg Gly Ala Gln Ile Gln Ala Ala Arg Glu Lys Asn Ile
260   265   270

Gln Lys Asp Pro Gln Glu Asn Ile Phe Leu Cys Gln Ala Leu Arg
275   280   285

Thr Phe Phe Pro Asn Ser Glu Phe Leu His Ser Cys Val Met Ser
290   295   300

Leu Lys Asn Arg His Val Ser Lys Ser Ser Cys Asn Tyr Asn His
305   310   315

His Leu Asp Val Val Asp Asn Leu Thr Leu Met Val Glu His Thr
320   325   330

Asp Ile Pro Glu Ala Ser Pro Ala Ser Thr Pro Gln Ile Ile Lys
335   340   345

His Lys Ala Leu Asp Leu Asp Asp Arg Trp Gln Phe Lys Arg Asn
350   355   360

Arg Leu Leu Asp Thr Gln Asp Lys Arg Ser Lys Ala Asn Thr Gly
365   370   375

Ser Ser Asn Gln Asp Lys Ala Ser Lys Met Ser Ser Pro Glu Thr
380   385   390

Asp Glu Glu Ile Leu Lys Met Lys Gly Phe Gly Glu Tyr Ser Arg
395   400   405

Ser Pro Thr Phe

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<211> 2651
<212> DNA
<213> Homo sapiens

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c 2651

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            20   25   30

Ser Gly Val Arg Arg Leu Tyr Val Ser Lys Gly Phe Asn Lys Asn
            35   40   45

Asn His Arg Leu Gly Glu Tyr Asn Gly Asp Glu Leu Lys Ile Cys
            50   55   60

Pro Gln Gly Ser Thr Cys Cys Ser Gln Glu Met Glu Glu Lys Tyr
            65   70   75

32

Ser Leu Gln Ser Lys Asp Asp Phe Lys Ser Val Val Ser Glu Gln
    80   85   90

Cys Asn His Leu Gln Ala Val Phe Ala Ser Arg Tyr Lys Lys Phe
        95   100   105

Asp Glu Phe Phe Lys Glu Leu Leu Glu Asn Ala Glu Lys Ser Leu
            110   115   120

Asn Asp Met Phe Val Lys Thr Tyr Gly His Leu Tyr Met Gln Asn
            125   130   135

Ser Glu Leu Phe Lys Asp Leu Phe Val Glu Leu Lys Arg Tyr Tyr
            140   145   150

Val Val Gly Asn Val Asn Leu Glu Glu Met Leu Asn Asp Phe Trp
            155   160   165

Ala Arg Leu Leu Glu Arg Met Phe Arg Leu Val Asn Ser Gln Tyr
            170   175   180

His Phe Thr Asp Gln Tyr Leu Glu Cys Val Ser Lys Tyr Thr Gln
            185   190   195

Gln Leu Lys Pro Phe Gly Asp Val Pro Arg Lys Leu Lys Leu Gln
            200   205   210

Val Thr Arg Ala Phe Val Ala Ala Arg Thr Phe Ala Gln Gly Leu
            215   220   225

Ala Val Ala Gly Asp Val Val Ser Lys Val Ser Val Val Asn Ile
            230   235   240

Thr Ala Gln Cys Trp His Ala Leu Leu Lys Met Ile Tyr Cys Ser
            245   250   255

His Cys Arg Gly Leu Val Thr Val Lys Pro Cys Tyr Asn Tyr Cys
            260   265   270

Ser Asn Ile Met Arg Gly Cys Leu Ala Asn Gln Gly Asp Leu Asp
            275   280   285

Phe Glu Trp Asn Asn Phe Ile Asp Ala Met Leu Met Val Ala Glu
            290   295   300

Arg Leu Glu Gly Pro Phe Asn Ile Glu Ser Val Met Asp Pro Ile
            305   310   315

Asp Val Lys Ile Ser Asp Ala Ile Met Asn Met Gln Asp Asn Ser
            320   325   330

Val Gln Val Ser Asn Lys Val Phe Gln Gly Cys Gly Pro Pro Lys
            335   340   345

Pro Leu Pro Ala Gly Arg Ile Ser Arg Ser Ile Ser Glu Ser Ala
            350   355   360

Phe Ser Ala Arg Gly Ala Ala His His Gly Ile Ile Arg Pro
            365   370

Thr Ala Ala Gly Thr Ser Leu Asp Arg Leu Val Thr Asp Val Lys
            380   385   390

Glu Lys Leu Lys Gln Ala Lys Lys Phe Trp Ser Ser Leu Pro Ser
                395   400   405

Asn Val Cys Asn Asp Glu Arg Met Ala Ala Gly Asn Gly Asn Glu
                410   415   420

Asp Asp Cys Trp Asn Gly Lys Gly Lys Ser Arg Tyr Leu Phe Ala
                425   430   435

Val Thr Gly Asn Gly Leu Ala Asn Gln Gly Asn Asn Pro Glu Val
                440   445   450

Gln Val Asp Thr Ser Lys Pro Asp Ile Leu Ile Leu Arg Gln Ile
                455   460   465

Met Ala Leu Arg Val Met Thr Ser Lys Met Lys Asn Ala Tyr Asn
                470   475   480

Gly Asn Asp Val Asp Phe Phe Asp Ile Ser Asp Glu Ser Ser Ser
                485   490   495

Glu Gly Ser Gly Ser Gly Cys Glu Tyr His Gln Cys Pro Ser Ala
                500   505   510

Phe Asp Tyr Asn Ala Thr Asp His Ala Gly Lys Ser Ala Asn Glu
                515   520   525

Lys Ala Asp Ser Ala Gly Val Arg Pro Gly Ala Gln Ala Tyr Leu
                530   535   540

Leu Thr Val Phe Cys Ile Leu Phe Leu Val Met Gln Arg Glu Trp
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Arg

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<211> 870
<212> DNA
<213> Homo Sapien

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gccaagaaga cagtgagcac acctaccaga cactcttctt ctccacctc 600

actctcccac tgtacccacc cctaaatcat tccagtgctc tcaaaaagca 650

tgtttttcaa gatcattttg tttgttgctc tctctagtgt cttcttctct 700

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ctgaaagatt ccaggaaact gtagcttcct agctagtgtc atttaacctt 800

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tcaaaaaaaa aaaaaaaaaa 870

<210> 26
<211> 119
<212> PRT
<213> Homo Sapien

<400> 26
  Met Lys Val Leu Ile Ser Ser Leu Leu Leu Leu Leu Pro Leu Met
    1   5   10   15

  Leu Met Ser Met Val Ser Ser Ser Leu Asn Pro Gly Val Ala Arg
              20   25   30

  Gly His Arg Asp Arg Gly Gln Ala Ser Arg Arg Trp Leu Gln Glu
              35   40   45

  Gly Gly Gln Glu Cys Glu Cys Lys Asp Trp Phe Leu Arg Ala Pro
              50   55   60

  Arg Arg Lys Phe Met Thr Val Ser Gly Leu Pro Lys Lys Gln Cys
              65   70   75

  Pro Cys Asp His Phe Lys Gly Asn Val Lys Lys Thr Arg His Gln
              80   85   90

  Arg His His Arg Lys Pro Asn Lys His Ser Arg Ala Cys Gln Gln
              95   100   105

  Phe Leu Lys Gln Cys Gln Leu Arg Ser Phe Ala Leu Pro Leu
              110   115

<210> 27
<211> 1371
<212> DNA
<213> Homo Sapien

<400> 27
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  ggagcacag ctcagagctg gtctgccatg gacatgctgg tcccactcct 100

  gcagctgctg gtgctgcttc ttaccctgcc cctgcacctc atggctctgc 150

  tttttgctg gcgggttg tgtttagct acttccctc ctgctggcttt 200

  gtgctgactc ccaagagcaa cagcaagatg gagagcaaga aagggagt 250

  cttcagccag ataaaggggc ttacaggagc ctcaggaaaa gtggccctac 300

35

tgcagctggg ctgcggaacc ggagccaact ttcagttcta cccaccgggc 350

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atgagcctg gctgagaaca ggcactcca atatgagcgg tttgcggtgg 450

cctctgcaga ggacatgaga cagctggctg atggctccat ggattggtg 500

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ctggaaggat cttgagaacg cccagttctc cgaaatcca atggaacgac 750

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gctgcaaac aattttcc aagctccaag gcactcattt gctccttcc 850

cagcctcaa ttacaacaag ccaccacca gcctatctat cttccactga 900

tagggacta gcagaatgag agaagacatt catgtaccac ctactagtcc 950

tctcttccc aactctgcc aggcaatct ctaacttcaa tcccgccttc 1000

gtcagtaaa aagtctact ttacgctga cccagggagg aaacactagg 1050

acctcttgt atcctcaact gcaagtttct ggactagtct cccacgttt 1100

gctcttaat gttgtcctt tccttcgttc ccatggtaaa gctcctctcg 1150

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tcatggtgcc tgcatccctg ccaagccccc ctgacctct ctcccacta 1250

ccacttctt cctgagctgg gggaaccagg gagaatcaga gatgctgggg 1300

atgcagagc aagactcaa caggcagagg ttttgttctc aaatattttt 1350

taataaatag acraaaccac g 1371

<210> 18
<211> 377
<212> PRT
<213> Homo Sapien

<400> 18

Met Asp Ile Leu Val Pro Leu Leu Gln Leu Leu Val Leu Leu Leu
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Thr Leu Pro Leu His Leu Met Ala Leu Leu Gly Cys Trp Gln Pro
            20   25   30

Lys Cys Lys Ser Tyr Phe Pro Tyr Leu Met Ala Val Leu Thr Pro
            35   40   45

Lys Ser Asn Arg Lys Met Glu Ser Lys Lys Arg Glu Leu Phe Ser
            50   55   60

36

Gln Ile Lys Gly Leu Thr Gly Ala Ser Gly Lys Val Ala Leu Leu
            65   70   75

Glu Leu Gly Cys Gly Thr Gly Ala Asn Phe Gln Phe Tyr Pro Pro
            80   85   90

Gly Cys Arg Val Thr Cys Leu Asp Pro Asn Pro His Phe Glu Lys
            95   100   105

Phe Leu Thr Lys Ser Met Ala Glu Asn Arg His Leu Gln Tyr Glu
            110   115   120

Arg Phe Val Val Ala Pro Gly Glu Asp Met Arg Gln Leu Ala Asp
            125   130   135

Gly Ser Met Asp Val Val Val Cys Thr Leu Val Leu Cys Ser Val
            140   145   150

Gln Ser Pro Arg Lys Val Leu Gln Glu Val Arg Arg Val Leu Arg
            155   160   165

Pro Gly Gly Val Leu Phe Phe Trp Glu His Val Ala Glu Pro Tyr
            170   175   180

Gly Ser Trp Ala Phe Met Trp Gln Gln Val Phe Glu Pro Thr Trp
            185   190   195

Lys His Ile Gly Asp Gly Cys Cys Leu Thr Arg Glu Thr Trp Lys
            200   205   210

Asp Leu Glu Asn Ala Gln Phe Ser Glu Ile Gln Met Glu Arg Gln
            215   220   225

Pro Pro Pro Leu Lys Trp Leu Pro Val Gly Pro His Ile Met Gly
            230   235   240

Lys Ala Val Lys Gln Ser Phe Pro Ser Ser Lys Ala Leu Ile Lys
            245   250   255

Ser Phe Pro Ser Leu Gln Leu Glu Gln Ala Thr His Gln Pro Ile
            260   265   270

Tyr Leu Pro Leu Arg Gly Thr
            275

(2)0: 29
(2)1: 494
(2)2: DNA
(2)3: Homo Sapien

(3)0: 29
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  gactggtcgg tgcccagaaa gtctcttctg ccactgacgc ccccatcagg 150

  gattaagcct tcttccccc ttcctttctg tgtcctgt ctcatcggcc 200

  tgccatgacc tgcagccaag cccaaccccg tgggaaggt tataagttt 250

  aggatggcta agaaagctgg gagataggga acagaagagg gtagtggatg 300

ggctaggggg gctgccttat ttaaagtggt tgtttatgat tcttatacta 350

atttatacaa agatattaag gccctgttca ttaagaaatt gttcccttcc 400

cctgtgttca atgtttgtaa agattgttct gtgtaaatat gtctttataa 450

taaacagtta aaagctgaaa aaaaaaaaaa aaaaaaaaaa aaaa 494

<210> 30
<211> 73
<212> PRT
<213> Homo Sapien

<100> 30
Met Leu Leu Leu Thr Leu Leu Leu Leu Leu Leu Leu Leu Lys Gly
1   5   10   15

Ser Cys Leu Glu Trp Gly Leu Val Gly Ala Gln Lys Val Ser Ser
            20   25   30

Ala Thr Asp Ala Pro Ile Arg Asp Trp Ala Phe Phe Pro Pro Ser
            35   40   45

Phe Leu Cys Leu Leu Pro His Arg Pro Ala Met Thr Cys Ser Gln
            50   55   60

Ala Gln Pro Arg Gly Glu Gly Glu Lys Val Gly Asp Gly
            65   70

<210> 31
<211> 1660
<212> DNA
<213> Homo Sapien

<100> 31
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atgatgttga caccctccac cgaattctaa gtggaatcat gtcgggaaga 200

gatacaatcc ttggcctgtg tatcctggca ttagccttgt ctttggccat 250

gatgtttacc ttcagattca tcaccatcct tctggttcac attttcattt 300

cattggttat tttgggattg ttgtttgtct gcggtgtttt atggtggctg 350

tattatgact ataccaacga cctcagcata gaattggaca cagaaaggga 400

aaatatgaag tgcgtgctgg ggtttgctat cgtatccaca ggcatcacgg 450

cagtgctgct cgtcttgatt tttgttctca gaaagagaat aaaattgaca 500

gttgagcttt tccaaatcac aaataaagcc atcagcagtg ctcccttcct 550

gatgtttcag ccactgtgga catttgccat cctcattttc ttctgggtcc 600

tctgggtggc tgtgctacta agcctgggaa ctgcaggtgc tgcccaggtt 650

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caatgcaagg gaacagcagg acaagcactc attaaggaat gaggagggaa 1500

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<210> 32
<211> 445
<212> PRT
<213> Homo Sapien

<400> 32
Met Ser Gly Arg Asp Thr Ile Leu Gly Leu Cys Ile Leu Ala Leu
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Ala Leu Ser Leu Ala Met Met Phe Thr Phe Arg Phe Ile Thr Thr
              20   25   30

Leu Leu Val His Ile Phe Ile Ser Leu Val Ile Leu Gly Leu Leu
              35   40   45

Phe Val Cys Gly Val Leu Trp Trp Leu Tyr Tyr Asp Tyr Thr Asn
              50   55   60

Asp Leu Ser Ile Glu Leu Asp Thr Leu Arg Glu Asn Met Leu Cys
              65   70   75

Val Leu Gly Phe Ala Ile Val Ser Thr Gly Ile Thr Ala Val Leu
              80   85   90

39

Leu Val Leu Ile Phe Val Leu Arg Lys Arg Ile Lys Leu Thr Val
                95   100   105

Glu Leu Phe Gln Ile Thr Asn Lys Ala Ile Ser Ser Ala Pro Phe
                110   115   120

Leu Leu Phe Gln Pro Leu Trp Thr Phe Ala Ile Leu Ile Phe Phe
                125   130   1 5

Trp Val Leu Trp Val Ala Val Leu Leu Ser Leu Gly Thr Ala Gly
                140   145   15

Ala Ala Gln Val Met Glu Gly Gly Gln Val Glu Tyr Lys Pro Leu
                1   1   16

Ser Gly Ile Arg Tyr Met Trp Ser Tyr His Leu Ile Gly Leu Ile
                170   175   180

Trp Thr Ser Gly Phe Ile Leu Ala Cys Gln Gln Met Thr Ile Ala
                1 5   1   1

Gly Ala Val Val Thr Cys Tyr Phe Asn Arg Ser Lys Asn Asp
                200   205   2

Pro Asp His Pro Ile Leu Ser Ser Leu Ser Ile Leu Phe Phe Tyr
                215   2 0   2

His Gln Gly Thr Val Val Lys Gly Ser Ile Leu Ile Ser Val Val
                                                            2

Arg Ile Pro Arg Ile Ile Val Met Tyr Pro Gln Asn Ala Leu Lys

Glu Gln Gln His Gly Ala Leu Ser Arg Tyr Leu Phe Arg Cys Cys
                                      5

Tyr Cys Cys Phe Trp Cys Leu Asp Lys Tyr Leu Leu His Leu Asn
)

Gln Asn Ala Tyr Thr Thr Thr Ala Ile Asn Gly Thr Asp Phe Lys
                                      5

Thr Ser Ala Lys Asp Ala Phe Lys Ile Leu Ser Lys Asn Ser Ser
                                      10   15

His Phe Thr Ser Ile Asn Cys Phe Gly Asp Phe Ile Ile Phe Leu
                 0   5   0

Gly Lys Val Leu Val Val Cys Phe Thr Val Phe Gly Gly Leu Met
                 5   10   5

Ala Phe Asn Tyr Asn Arg Ala Phe Gln Val Trp Ala Val Pro
                 0   5

Leu Leu Val Ala Phe Phe Ala Tyr Leu Val Ala His Ser Phe Leu
                565   70   575

Ser Val Phe Glu Thr Val Leu Asp Ala Arg Phe Leu Cys Phe Ala
                580   90

Val Asp Leu Glu Thr Asn Asp Gly Ser Ser Glu Lys Pro Tyr Phe
                395   400   405

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Met Asp Gln Glu Phe Leu Ser Phe Val Lys Arg Ser Asn Lys Leu
            410             415                 420

Asn Asn Ala Arg Ala Gln Gln Asp Lys His Ser Leu Arg Asn Glu
            425             430                 435

Glu Gly Thr Glu Leu Gln Ala Ile Val Arg
            440             445
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<210> 24
<211> 2273
<212> DNA
<213> Homo Sapien

<400> 24
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aaggggaaaa gaatattcat tctgtgtggt gaaaattttt tgaaaaaaaa 150
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ttctcactat gaaggcatct gttattgaaa tgttccttgt tttgctggtg 250
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catgtttatg gcactgacgt gtatgcatcc tactccagtg tgtgtggcgc 450
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gcaaacgggcg attccgaatc cagaagtagc tcctggctga tgttgcccaa 1150
gctcttgaca ttggccctgc aggtccactg atgggtgttg tccagtatca 1200
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41

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<210> 34
<211> 678
<212> PRT
<213> Homo Sapien

<400> 34

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Phe Leu Val Leu Leu Val Thr Gly Val His Ser Asn Lys Glu Thr
            20                  25                  30

Ala Lys Lys Ile Lys Arg Pro Lys Phe Thr Val Pro Gln Ile Asn
            35                  40                  45

Cys Asp Val Lys Ala Gly Lys Ile Ile Asp Pro Glu Phe Ile Val
            50                  55                  60

Lys Cys Pro Ala Gly Cys Gln Asp Pro Lys Tyr His Val Tyr Gly
            65                  70                  75

Thr Asp Val Tyr Ala Ser Tyr Ser Ser Val Cys Gly Ala Ala Val
            80                  85                  90

His Ser Gly Val Leu Asp Asn Ser Gly Gly Lys Ile Leu Val Arg
            95                  100                 105

Lys Val Ala Gly Gln Ser Gly Tyr Lys Gly Ser Tyr Ser Asn Gly
            110                 115                 120

Val Gln Ser Leu Ser Leu Pro Arg Trp Arg Glu Ser Phe Ile Val
            125                 130                 135

Leu Glu Ser Lys Pro Lys Lys Gly Val Thr Tyr Pro Ser Ala Leu
            140                 145                 150

Thr Tyr Ser Ser Ser Lys Ser Pro Ala Ala Gln Ala Gly Glu Thr
            155                 160                 165

Thr Lys Ala Tyr Gln Arg Pro Pro Ile Pro Gly Thr Thr Ala Gln
            170                 175                 180

Pro Val Thr Leu Met Gln Leu Leu Ala Val Thr Val Ala Val Ala
            185                 190                 195

Thr Pro Thr Thr Leu Pro Arg Pro Ser Pro Ser Ala Ala Ser Thr
            200                 205                 210

Thr Ser Ile Pro Arg Pro Gln Ser Val Gly His Arg Ser Gln Glu
            215                 220                 225

Met Asp Leu Trp Ser Thr Ala Thr Tyr Thr Ser Ser Gln Asn Arg
            230                 235                 240

Pro Arg Ala Asp Pro Gly Ile Gln Arg Gln Asp Pro Ser Gly Ala
            245                 250                 255

Ala Phe Gln Lys Pro Val Gly Asn Arg Val Ser Leu Arg Pro Arg
            260                 265                 270

Pro Lys Glu Glu Leu Ser Thr Gln Ser Leu Gln Pro Val Ser Leu
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43

Gly Asp Pro Asn Cys Lys Ile Asp Leu Ser Phe Leu Ile Asp Gly
            290   295   300

Ser Thr Ser Ile Gly Lys Arg Arg Phe Arg Ile Gln Lys Gln Leu
            305   310   315

Leu Ala Asp Val Ala Gln Ala Leu Asp Ile Gly Pro Ala Gly Pro
            320   325   330

Leu Met Gly Val Val Gln Tyr Gly Asp Asn Pro Ala Thr His Phe
            335   340   345

Asn Leu Lys Thr His Thr Asn Ser Arg Asp Leu Lys Thr Ala Ile
            350   355   360

Glu Lys Ile Thr Gln Arg Gly Gly Leu Ser Asn Val Gly Arg Ala
            365   370   375

Ile Ser Phe Val Thr Lys Asn Phe Phe Ser Lys Ala Asn Gly Asn
            380   385   390

Arg Ser Gly Ala Pro Asn Val Val Val Val Met Val Asp Gly Trp
            395   400   405

Pro Thr Asp Lys Val Glu Glu Ala Ser Arg Leu Ala Arg Glu Ser
            410   415   420

Gly Ile Asn Ile Phe Phe Ile Thr Ile Glu Gly Ala Ala Glu Asn
            425   430   435

Glu Lys Gln Tyr Val Val Glu Pro Asn Phe Ala Asn Lys Ala Val
            440   445   450

Cys Arg Thr Asn Gly Phe Tyr Ser Leu His Val Gln Ser Trp Ile
            455   460   465

Gly Leu His Lys Thr Leu Gln Pro Leu Val Lys Arg Val Cys Asp
            470   475   480

Thr Asp Arg Leu Ala Cys Ser Lys Thr Cys Leu Asn Ser Ala Asp
            485   490   495

Ile Gly Phe Val Ile Asp Gly Ser Ser Ser Val Gly Thr Gly Asn
            500   505   510

Phe Arg Thr Val Leu Gln Phe Val Thr Asn Leu Thr Lys Glu Phe
            515   520   525

Glu Ile Ser Asp Thr Asp Thr Arg Ile Gly Ala Val Gln Tyr Thr
            530   535   540

Tyr Glu Gln Arg Leu Glu Phe Gly Phe Asp Lys Tyr Ser Ser Lys
            545   550   555

Pro Asp Ile Leu Asn Ala Ile Lys Arg Val Gly Tyr Trp Ser Gly
            560   565   570

Gly Thr Ser Thr Gly Ala Ala Ile Asn Phe Ala Met Asp His Thr
            575   580   585

Phe Lys Lys Ser Lys Pro Asn Lys Arg Lys Leu Met Ile Leu Ile

Thr Asp Gly Arg Ser Tyr Asp Asp Val Arg Ile Pro Ala Met Ala
    605   610   615

Ala His Leu Lys Gly Val Ile Thr Tyr Ala Ile Gly Val Ala Trp
    620   625   630

Ala Ala Gln Glu Glu Leu Glu Val Ile Ala Thr His Pro Ala Arg
    635   640   645

Asp His Ser Phe Phe Val Asp Glu Phe Asp Asn Leu His Gln Tyr
    650   655   660

Val Pro Arg Ile Ile Gln Asn Ile Cys Thr Glu Phe Asn Ser Asn
    665   670   675

Pro Arg Asn

<210> 35
<211> 2095
<212> DNA
<213> Homo Sapien

<400> 35
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gtagttaca acagatctga gtgtttttat taagcatgga atacagaaaa 1??
caacaaaaaa cttaagcttt aatttcatct ggaattccac agtttttctta 2?
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acgtggtgct ctccgactac tcaccccgag tgtaaagaac cttcggctcg ????
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gagtaggatg tcactgagat ccctcaaatg gagcctcctg ctgcgtcac 4??
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atagaacgcg tgaactggat gtacttctat gagtatgagc cgatttacag '??
acaagactt cacttcacac ttcgagagca ttcaaactgc tctcatcaaa ??.
atccattct ggtcattctg gtgacctccc accccttcaga tgtgaaagcc ????
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atccgacaag attttttaga cacatataat aacctgacct tgaaaaccat 00
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<212> PRT
<213> Homo Sapien

<400> 36
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Arg Ser Leu Lys Trp Ser Leu Leu Leu Leu Ser Leu Leu Ser Phe
            20   25   30

Phe Val Met Trp Tyr Leu Phe Ser Pro His Tyr Asn Val Ile Glu
            35   40   45

Arg Val Asn Trp Met Tyr Phe Tyr Glu Tyr Glu Pro Ile Tyr Arg

46

Gln Asp Phe His Phe Thr Leu Arg Glu His Ser Asn Cys Ser His
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Gln Asn Pro Phe Leu Val Ile Leu Val Thr Ser His Pro Ser Asp

Val Lys Ala Arg Gln Ala Ile Arg Val Thr Trp Gly Glu Lys Lys
                                    100   105

Ser Trp Trp Gly Tyr Glu Val Leu Thr Phe Phe Leu Leu Gly Gln
                                    115   120

Glu Ala Glu Lys Glu Asp Lys Met Leu Ala Leu Ser Leu Glu Asp
        125   130   135

Glu His Leu Leu Tyr Gly Asp Ile Ile Arg Gln Asp Phe Leu Asp
            140   145

Thr Tyr Asn Asn Leu Thr Leu Lys Thr Ile Met Ala Phe Arg Trp

Val Thr Glu Phe Cys Pro Asn Ala Lys Tyr Val Met Lys Thr Asp

Thr Asp Val Phe Ile Asn Thr Gly Asn Leu Val Lys Tyr Leu Leu

Asn Leu Asn His Ser Glu Lys Phe Phe Thr Gly Tyr Pro Leu Ile
            200   205

Asp Asn Tyr Ser Tyr Arg Gly Phe Tyr Gln Lys Thr His Ile Ser
            215   220

Tyr Gln Glu Tyr Pro Phe Lys Val Phe Pro Tyr Cys Ser Gly

Leu Gly Tyr Ile Met Ser Arg Asp Leu Val Pro Arg Ile Tyr Gln

Met Met Gly His Val Lys Pro Ile Lys Phe Glu Asp Val Tyr Val

Gly Ile Cys Leu Asn Leu Leu Lys Val Asn Ile His Ile Pro Gln

Asp Thr Asn Leu Phe Phe Leu Tyr Arg Ile His Leu Asp Val Lys

Gln Leu Arg Arg Val Ile Ala Ala His Gly Phe Ser Ser Lys Leu

Ile Ile Thr Phe Trp Gln Val Met Leu Arg Asn Thr Thr Cys His
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Tyr

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<211> 2846
<212> DNA
<213> Homo Sapien

<400> 37

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48

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    Met Glu Leu Gly Cys Trp Thr Gln Leu Gly Leu Thr Pro Leu Val
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    Leu Leu Leu Ile Ser Ser Leu Pro Arg Glu Tyr Thr Val Ile Asn

Glu Ala Cys Pro Gly Ala Glu Trp Asn Ile Met Cys Arg Glu Cys
35   40   45

Cys Glu Tyr Asp Gln Ile Glu Cys Val Cys Pro Gly Lys Arg Glu
50   55   60

Val Val Gly Tyr Thr Ile Pro Cys Cys Arg Asn Glu Glu Asn Glu
65   70   75

Cys Asp Ser Cys Leu Ile His Pro Gly Cys Thr Ile Phe Glu Asn
80   85   90

Cys Lys Ser Cys Arg Asn Gly Ser Trp Gly Gly Thr Leu Asp Asp
95   100   105

Phe Tyr Val Lys Gly Phe Tyr Cys Ala Glu Cys Arg Ala Gly Trp
110   115   120

Tyr Gly Gly Asp Cys Met Arg Cys Gly Gln Val Leu Arg Ala Pro
125   130   135

Lys Gly Gln Ile Leu Leu Glu Ser Tyr Pro Leu Asn Ala His Cys
140   145   150

Glu Trp Thr Ile His Ala Lys Pro Gly Phe Val Ile Gln Leu Arg
155   160   165

Phe Val Met Leu Ser Leu Glu Phe Asp Tyr Met Cys Gln Tyr Asp
170   175   180

Tyr Val Glu Val Arg Asp Gly Asp Asn Arg Asp Gly Gln Ile Ile
185   190   195

Lys Arg Val Cys Gly Asn Glu Arg Pro Asn Pro Ile Gln Ser Ile
200   205   210

Gly Ser Ser Leu His Val Leu Phe His Ser Asp Gly Ser Lys Asn
215   220   225

Phe Asp Gly Phe His Ala Ile Tyr Glu Glu Ile Thr Ala Cys Ser
230   235   240

Ser Ser Pro Cys Phe His Asp Gly Thr Cys Val Leu Asp Lys Ala
245   250   255

Gly Ser Tyr Lys Cys Ala Cys Leu Ala Gly Tyr Thr Gly Gln Arg
260   265   270

Cys Glu Asn Leu Leu Glu Glu Arg Asn Lys Ser Asp Pro Gly Gly
275   280   285

Pro Val Asn Gly Tyr Gln Lys Ile Thr Gly Gly Pro Gly Leu Ile
290   295   300

Asn Gly Arg His Ala Lys Ile Gly Thr Val Val Ser Phe Phe Cys
305   310   315

Asn Asn Ser Tyr Val Leu Ser Gly Asn Glu Lys Arg Thr Cys Gln
320   325   330

Gln Asn Gly Glu Trp Ser Gly Lys Gln Pro Ile Cys Ile Lys Ala

Cys Arg Glu Pro Lys Ile Ser Asp Leu Val Arg Arg Arg Val Leu
                350   355   360

Pro Met Gln Val Gln Ser Arg Glu Thr Pro Leu His Gln Leu Tyr
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Ser Ala Ala Phe Ser Lys Gln Lys Leu Gln Ser Ala Pro Thr Lys
                380   385   390

Lys Pro Ala Leu Pro Phe Gly Asp Leu Pro Met Gly Tyr Gln His
                395   400   405

Leu His Thr Gln Leu Gln Tyr Glu Cys Ile Ser Pro Phe Tyr Arg
                410   415   420

Arg Leu Gly Ser Ser Arg Arg Thr Cys Leu Arg Thr Gly Lys Trp
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Ser Gly Arg Ala Pro Ser Cys Ile Pro Ile Cys Gly Lys Ile Gln
                440   445   450

Asn Ile Thr Ala Pro Lys Thr Gln Gly Leu Arg Trp Pro Trp Gln
                455   460   465

Ala Ala Ile Tyr Arg Arg Thr Ser Gly Val His Asp Gly Ser Leu
                470   475   480

His Lys Gly Ala Trp Phe Leu Val Cys Ser Gly Ala Leu Val Asn
                485   490   495

Glu Arg Thr Val Val Val Ala Ala His Lys Val Thr Asp Leu Gly
                500   505   510

Lys Val Thr Met Ile Lys Thr Ala Asp Leu Lys Val Val Leu Gly
                515   520   525

Lys Phe Tyr Arg Asp Asp Asp Arg Asp Glu Lys Thr Ile Gln Ser
                530   535   540

Leu Gln Ile Ser Ala Ile Ile Leu His Pro Asn Tyr Asp Pro Ile
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Leu Leu Asp Ala Asp Ile Ala Ile Leu Lys Leu Leu Asp Lys Ala
                560   565   570

Arg Ile Ser Thr Arg Val Gln Pro Ile Lys Leu Ala Ala Ser Arg
                575   580   585

Asp Leu Ser Thr Ser Phe Gln Glu Ser His Ile Thr Val Ala Gly
                590   595   600

Trp Asn Val Leu Ala Asp Val Arg Ser Pro Gly Phe Lys Asn Asp
                605   610   615

Thr Leu Arg Ser Gly Val Val Ser Val Val Asp Ser Leu Leu Cys
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Glu Glu Gln His Glu Asp His Gly Ile Pro Val Ser Val Thr Asn
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Asn Met Phe Cys Ala Ser Trp Glu Pro Thr Ala Pro Ser Asp Ile

Cys Thr Ala Glu Thr Gly Gly Ile Ala Ala Val Ser Phe Pro Gly
    665   670

Arg Ala Ser Pro Glu Pro Arg Trp His Leu Met Gly Leu Val Ser
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Trp Ser Tyr Asp Lys Thr Cys Ser His Arg Leu Ser Thr Ala Trp
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Thr Lys Val Leu Pro Phe Lys Asp Trp Ile Glu Arg Asn Met Lys
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<211> 1571
<212> DNA
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53

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<213> Homo Sapien

<400> 46

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Leu Cys Lys Gly Ala Ser His Tyr Gly Leu Thr Lys Asp Arg Lys
                35   40   45

Arg Arg Ser Gln Asp Gly Cys Pro Asp Gly Cys Ala Ser Leu Thr
                50   55   60

Ala Thr Ala Pro Ser Pro Glu Val Ser Ala Ala Ala Thr Ile Ser
                65   70   75

Leu Met Thr Asp Glu Pro Gly Leu Asp Asn Pro Ala Tyr Val Ser
                80   85   90

Ser Ala Glu Asp Gly Gln Pro Ala Ile Ser Pro Val Asp Ser Gly
                95   100   105

Arg Ser Asn Arg Thr Arg Ala Arg Pro His Glu Arg Ser Thr Ile
                110   115   120

Arg Ser Arg Ser Phe Lys Lys Ile Asn Arg Ala Leu Ser Val Leu
                125   130   135

Arg Arg Thr Lys Ser Gly Ser Ala Val Ala Asn His Ala Asp Gln
                140   145   150

Gly Arg Glu Asn Ser Glu Asn Thr Thr Ala Pro Glu Val Phe Pro
                155   160   165

Arg Leu Tyr His Leu Ile Pro Asp Gly Gly Ile Thr Ser Ile Lys
                170   175   180

Ile Asn Arg Val Asp Pro Ser Glu Ser Leu Ser Ile Arg Leu Val
                185   190   195

Gly Gly Ser Glu Thr Pro Leu Val His Ile Ile Ile Gln His Ile
                200   205   210

Tyr Arg Asp Gly Val Ile Ala Arg Asp Gly Arg Leu Leu Pro Gly
                215   220   225

Asp Ile Ile Leu Lys Val Asn Gly Met Asp Ile Ser Asn Val Pro
                230   235   240

His Asn Tyr Ala Val Arg Leu Leu Arg Gln Pro Cys Gln Val Leu
                245   250   255

Trp Leu Thr Val Met Arg Glu Gln Lys Phe Arg Ser Arg Asn Asn
                260   265   270

Gly Glu Ala Pro Leu Ala Tyr Arg Pro Arg Asp Asp Ser Phe His
                275   280   285

Val Ile Leu Asn Lys Ser Ser Pro Glu Glu Gln Leu Gly Ile Lys
                290   295   300

54

Leu Val Arg Lys Val Asp Glu Pro Gly Val Phe Ile Phe Asn Val
　　　　　305　　　　　　　　　　310　　　　　　　　　　315

Leu Asp Gly Gly Val Ala Tyr Arg His Gly Gln Leu Glu Glu Asn
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Asp Arg Val Leu Ala Ile Asn Gly His Asp Leu Arg Tyr Gly Ser
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Pro Glu Ser Ala Ala His Leu Ile Gln Ala Ser Glu Arg Arg Val
　　　　　350　　　　　　　　　　355　　　　　　　　　　360

His Leu Val Val Ser Arg Gln Val Arg Gln Arg Ser Pro Asp Ile
　　　　　365　　　　　　　　　　370　　　　　　　　　　375

Phe Gln Glu Ala Gly Trp Asn Ser Asn Gly Ser Trp Ser Pro Gly
　　　　　380　　　　　　　　　　385　　　　　　　　　　390

Pro Gly Glu Arg Ser Asn Thr Pro Lys Pro Leu His Pro Thr Ile
　　　　　395　　　　　　　　　　400　　　　　　　　　　405

Thr Cys His Glu Lys Val Val Asn Ile His Lys Asp Pro Gly Glu
　　　　　410　　　　　　　　　　415　　　　　　　　　　420

Ser Leu Gly Met Thr Val Ala Gly Gly Ala Ser His Arg Glu Trp
　　　　　425　　　　　　　　　　430　　　　　　　　　　435

Asp Leu Pro Ile Tyr Val Ile Ser Val Glu Pro Gly Gly Val Ile
　　　　　440　　　　　　　　　　445　　　　　　　　　　450

Ser Arg Asp Gly Arg Ile Lys Thr Gly Asp Ile Leu Leu Asn Val
　　　　　455　　　　　　　　　　460　　　　　　　　　　465

Asp Gly Val Glu Leu Thr Glu Val Ser Arg Ser Glu Ala Val Ala
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Leu Leu Lys Arg Thr Ser Ser Ser Ile Val Leu Lys Ala Leu Glu
　　　　　485　　　　　　　　　　490　　　　　　　　　　495

Val Lys Glu Tyr Glu Pro Gln Glu Asp Cys Ser Ser Pro Ala Ala
　　　　　500　　　　　　　　　　505　　　　　　　　　　510

Leu Asp Ser Asn His Asn Met Ala Pro Pro Ser Asp Trp Ser Pro
　　　　　515　　　　　　　　　　520　　　　　　　　　　525

Ser Trp Val Met Trp Leu Glu Leu Pro Arg Cys Leu Tyr Asn Cys
　　　　　530　　　　　　　　　　535　　　　　　　　　　540

Lys Asp Ile Val Leu Arg Arg Asn Thr Ala Gly Ser Leu Gly Phe
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Cys Ile Val Gly Gly Tyr Glu Glu Tyr Asn Gly Asn Lys Pro Phe
　　　　　560　　　　　　　　　　565　　　　　　　　　　570

Phe Ile Lys Ser Ile Val Glu Gly Thr Pro Ala Tyr Asn Asp Gly
　　　　　575　　　　　　　　　　580　　　　　　　　　　585

Arg Ile Arg Cys Gly Asp Ile Leu Leu Ala Val Asn Gly Arg Ser
　　　　　590　　　　　　　　　　595　　　　　　　　　　600

Thr Ser Gly Met Ile His Ala Cys Leu Ala Arg Leu Leu Lys Glu
　　　　　605　　　　　　　　　　610　　　　　　　　　　615

55

Leu Lys Gly Arg Ile Thr Leu Thr Ile Val Ser Trp Pro Gly Thr
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Phe Leu

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<211> 1264
<212> DNA
<213> Homo Sapien

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gatctcactt tggaagaggt acaggcagaa aatcccaaag tgtccagagg 450

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acagctcatt gttgagctga attttttcctt tttgtatttt cttagcagag 1300

ctcctggtga tgtagagtat aaaacagttg taacaagaca gctttcttag 1350

tcattttgat catgagggtt aaatattgta atatggatac ttgaaggact 1400

ttatataaaa ggatgactca aaggataaaa tgaacgctat ttgaggactc 1450

tggttgaagg agatttatttt aaatttgaag taatatatta tgggataaaa 1500

ggccacagga aataagactg ctgaatgtct gagagaacca gagttgttct 1550

cgtccaaggt agaaaggtac gaagatacaa tactgctatt catttatcct 1600

gtacaatcat ctgtgaagtg gtggtgtcag gtgagaaggc gtccacaaaa 1650

gaggggagaa aaggcgacga atcaggacac agtgaacttg ggaatgaaga 1700

ggtagcagga gggtggagtg tcggctgcaa aggcagcagt agctgagctg 1750

attgcacgtg ctgatagcct tcaggggagg acctacccag gtatgccttc 1800

cagtgatgcc caccagagaa tacattctct attagttttt aaagagtttt 1850

tgtaaaatga tttttgtacaa gtaggatatg aattagcagt ttacaagttt 1900

acatattaac caataataaa tatgtctatc aaatacctct gtagtaaaat 1950

gtgaaaaagc aaaa 1964

<110> 41
<111> 644
<112> PRT
<113> Homo Sapien

<400> 4
Met Gly Phe Asn Leu Thr Phe His Leu Ser Tyr Lys Phe Arg Leu
 1   5   10   15

Leu Leu Leu Leu Thr Leu Cys Leu Thr Val Val Gly Trp Ala Thr
            20   25   30

Ser Asn Tyr Phe Val Gly Ala Ile Gln Glu Ile Pro Lys Ala Lys
            35   40   45

Glu Phe Met Ala Asn Phe His Lys Thr Leu Ile Leu Gly Lys Gly
            50   55   60

Lys Thr Leu Thr Asn Glu Ala Ser Thr Lys Lys Val Glu Leu Asp
            65   70   75

Asn Cys Pro Ser Val Ser Pro Tyr Leu Arg Gly Gln Ser Lys Leu
            80   85   90

Ile Phe Lys Pro Asp Leu Thr Leu Glu Glu Val Gln Ala Glu Asn
            95   100   105

Pro Lys Val Ser Arg Gly Arg Tyr Arg Pro Gln Glu Cys Lys Ala
            110   115   120

Leu Gln Arg Val Ala Ile Leu Val Pro His Arg Asn Arg Glu Lys
            125   130   155

57

```
His Leu Met Tyr Leu Leu Glu His Leu His Pro Phe Leu Gln Arg
            140                 145                 150

Gln Gln Leu Asp Tyr Gly Ile Tyr Val Ile His Gln Ala Glu Gly
            155                 160                 165

Lys Lys Phe Asn Arg Ala Lys Leu Leu Asn Val Gly Tyr Leu Glu
            170                 175                 180

Ala Leu Lys Glu Glu Asn Trp Asp Cys Phe Ile Phe His Asp Val
            185                 190                 195

Asp Leu Val Pro Glu Asn Asp Phe Asn Leu Tyr Lys Cys Glu Glu
            200                 205                 210

His Pro Lys His Leu Val Val Gly Arg Asn Ser Thr Gly Tyr Arg
            215                 220                 225

Leu Arg Tyr Ser Gly Tyr Phe Gly Gly Val Thr Ala Leu Ser Arg
            230                 235                 240

Glu Gln Phe Phe Leu Val Asn Gly Phe Ser Asn Asn Tyr Trp Gly
            245                 250                 255

Trp Gly Gly Glu Asp Asp Asp Leu Arg Leu Arg Val Glu Leu Gln
            260                 265                 270

Arg Met Lys Ile Ser Arg Pro Leu Pro Glu Val Gly Lys Tyr Thr
            275                 280                 285

Met Val Phe His Thr Arg Asp Lys Gly Asn Glu Val Asn Ala Gly
            290                 295                 300

Arg Met Lys Leu Leu His Gln Val Ser Arg Val Trp Arg Thr Asp
            305                 310                 315

Gly Leu Ser Ser Lys Ser Tyr Lys Leu Val Ser Val Glu His Asn
            320                 325                 330

Pro Leu Tyr Ile Asn Ile Thr Val Asp Phe Trp Phe Gly Ala
            335                 340
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58

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa 485

<210> 44
<211> 84
<212> PRT
<213> Homo Sapien

<400> 44

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Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu Leu
1               5                   10                  15

Leu Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln
            20                  25                  30

Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala
        35                  40                  45

Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Arg Asp
            50                  55                  60

Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg
            65                  70                  75

Ser Lys Cys Gly Met Cys Cys Lys Thr
            80
```

<210> 45
<211> 1076
<212> DNA
<213> Homo Sapien

<400> 45

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gttgcttcat ttcagtggct gacttccaga gagcaatatg gctggttccc 50
caacatgctt caccctcatc tatatccttt ggcagctcac agggtcagca 100
gccactggac ccctgaaga gctggtcggt tccgttggtg cggccgtgac 150
ttttcccctg aagtccaaag taaagcaagt tgactctatt gtctggacct 200
tcaaacaaac ccctcttgtc accatacagc cagaagtggg cactatcata 250
gtgacccaaa atcgtaatag ggagagagta gacttccag atggaggcta 300
ctccctgaag cttagcaaac tgaagaagaa tgactcaggg atctactatg 350
tggggatata catcttatca ctccagcagc cctccaccca ggagtacgtg 400
ctgcatgtct acgagcacct gtcaaagcct aaagtcacca tggtctgca 450
gagcaataag aatggcacct gtgtgaccaa tctgacatgc tgcatggaac 500
atgggaaga ggatgtgatt tatacctgga aggccctggg gcaagcagcc 550
aatgaatccc ataatgggtc catcctcccc atctcctgga gatggggaga 600
aagtgatatg acttcatct gcgttgccag gaacccgtc agcagnnnn 650
tctcaagccc catccttacc aggaagctct gtgaaggtgc tgctgatgac 700
```
```

59

ccagattcct ccatggtcct cctgtgtctc ctgttgatgc ccctcctgct 750

cagtctcttt gtactgggac tatttctttg gtttctgaag agagagagac 800

aagaagagta cattgaagag aagaagagag tggacatttg tcgggaaact 850

cctaacatat gcccccattc tggagagaac acagagtacg acacaatccc 900

tcacactaat agaacaatcc taaaggaaga tccagcaaat acggtttact 950

ccactgtgga aatatcgaaa aagatggaaa atccccactc actgctcacg 1000

atgccagaca cacccagttt atttgcctat gagaatgtta tctagacagc 1050

agtgcactcc cctaagtttc tgctca 1076

<210> 46
<211> 335
<212> PRT
<213> Homo Sapien

<400> 46
Met Ala Gly Ser Pro Thr Cys Leu Thr Leu Ile Tyr Ile Leu Trp
1                   5                   10                  15

Gln Leu Thr Gly Ser Ala Ala Ser Gly Pro Val Lys Glu Leu Val
                20                  25                  30

Gly Ser Val Gly Gly Ala Val Thr Phe Pro Leu Lys Ser Lys Val
            35                  40                  45

Lys Gln Val Asp Ser Ile Val Trp Thr Phe Asn Thr Thr Pro Leu
        50                  55                  60

Val Thr Ile Gln Pro Glu Gly Gly Thr Ile Ile Val Thr Gln Asn
        65                  70                  75

Arg Asn Arg Glu Arg Val Asp Phe Pro Asn Gly Gly Tyr Ser Leu
        80                  85                  90

Lys Leu Ser Lys Leu Lys Lys Asn Asp Ser Gly Ile Tyr Tyr Val
            95                  100                 105

Gly Ile Tyr Ser Ser Ser Leu Gln Gln Pro Ser Thr Gln Glu Tyr
            110                 115                 120

Val Leu His Val Tyr Glu His Leu Ser Lys Pro Lys Val Thr Met
            125                 130                 135

Gly Leu Gln Ser Asn Lys Asn Gly Thr Cys Val Thr Asn Leu Thr
            140                 145                 150

Cys Cys Met Glu His Gly Glu Glu Asp Val Ile Tyr Thr Trp Lys
            155                 160                 165

Ala Leu Gly Gln Ala Ala Asn Glu Ser His Asn Gly Ser Ile Leu
            170                 175                 180

Pro Ile Ser Trp Arg Trp Gly Glu Ser Asp Met Thr Phe Ile Cys
            185                 190                 195

Val Ala Arg Asn Pro Val Ser Arg Asn Phe Ser Ser Pro Ile Leu
            200                 205                 210

Ala Arg Lys Leu Cys Glu Gly Ala Ala Asp Asp Pro Asp Ser Ser
215                         220                     225

Met Val Leu Leu Cys Leu Leu Leu Val Pro Leu Leu Leu Ser Leu
230                         235                     240

Phe Val Leu Gly Leu Phe Leu Trp Phe Leu Lys Arg Glu Arg Gln
245                         250                     255

Glu Glu Tyr Ile Glu Glu Lys Lys Arg Val Asp Ile Cys Arg Glu
260                         265                     270

Thr Pro Asn Ile Lys Pro His Ser Gly Glu Asn Thr Glu Tyr Asp
275                         280                     285

Thr Ile Pro His Thr Asn Arg Thr Ile Leu Lys Glu Asp Pro Ala
290                         295                     300

Asn Thr Val Tyr Ser Thr Val Glu Ile Pro Lys Lys Met Glu Asn
305                         310                     315

Pro His Ser Leu Leu Thr Met Pro Asp Thr Pro Arg Leu Phe Ala
320                         325                     330

Tyr Glu Asn Val Ile
335

<210> 47
<211> 766
<212> DNA
<213> Homo Sapien

<400> 47
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gaatcctgc aatgtattca gcctgctggt tctactgctg ttaggagtag 100

tttcaaggc gatacctcta attgtcagct tagttgagga agaccaattt 150

tctcaaaacc ccatctcttg ctttgagtgg tggttcccag gaattatagg 200

agcaggtctg atggccattc cagcaacaac aatgtccttg acagcaagaa 250

aaagagcctg ctgcaacaac agaactggaa tgttttcttc atcattttc 300

actgtgatca cagtcattgg tgctctgtat tgcatgctga tatccatcca 350

ggctctctta aaagtcctc tcatgtgtaa tttccaagc aacagtaatg 400

ccaattgtga attttcattg aaaaacatca gtgacattca tccagaatcc 450

ttcaactgc agtggttttt caatgactct tgtgcacctc ctactggttt 500

cgataaacc accagtaacg acaccatggc gagtggctgg agagcatcta 550

gttccactt cgattctgaa gaaaacaaac ataggcttat ccacttctca 600

                                                      650

cagtcagata gtcatcggtt ccttggctg tctgtgtgga gtctctaagc 700

gaagaagtca aattgtgtag tttaatggga ataaaatgta agtatcagta 750

gtttgaaaaa aaaaaa 766

<210> 48
<211> 229
<212> PRT
<213> Homo Sapien

<400> 48

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Met Thr Cys Cys Glu Gly Trp Thr Ser Cys Asn Gly Phe Ser Leu
1               5                   10                  15

Leu Val Leu Leu Leu Leu Gly Val Val Leu Asn Ala Ile Pro Leu
                20                  25                  30

Ile Val Ser Leu Val Glu Glu Asp Gln Phe Ser Gln Asn Pro Ile
                35                  40                  45

Ser Cys Phe Glu Trp Trp Phe Pro Gly Ile Ile Gly Ala Gly Leu
                50                  55                  60

Met Ala Ile Pro Ala Thr Thr Met Ser Leu Thr Ala Arg Lys Asn
                65                  70                  75

Ala Cys Cys Asn Asn Arg Thr Gly Met Phe Leu Ser Ser Phe Phe
                80                  85                  90

Ser Val Ile Thr Val Ile Gly Ala Leu Tyr Cys Met Leu Ile Ser
                95                  100                 105

Ile Gln Ala Leu Leu Lys Gly Pro Leu Met Cys Asn Ser Pro Ser
                110                 115                 120

Asn Ser Asn Ala Asn Cys Glu Phe Ser Leu Lys Asn Ile Ser Asp
                125                 130                 135

Ile His Pro Glu Ser Phe Asn Leu Gln Trp Phe Phe Asn Asp Ser
                140                 145                 150

Lys Ala Pro Pro Thr Gly Phe Asn Lys Pro Thr Ser Asn Asp Thr
                155                 160                 165

Met Ala Ser Gly Trp Arg Ala Ser Ser Phe His Phe Asp Ser Glu
                170                 175                 180

Glu Asn Lys His Arg Leu Ile His Phe Ser Val Phe Leu Gly Leu
                185                 190                 195

Leu Leu Val Gly Ile Leu Glu Val Leu Phe Gly Leu Ser Gln Ile
                200                 205                 210

Val Ile Gly Phe Leu Gly Cys Leu Cys Gly Val Ser Lys Arg Arg
                215                 220                 225

Ser Gln Ile Val
```

<210> 49
<211> 774
<212> DNA
<213> Homo Sapien

<400> 49

atccttctc tgcgctgcca gctcaggtga gccctcgcca agqtgacctc 50

gcaggacact ggtgaaggag cagtgaggaa cctgcagagt cacacagttg 100

cttaccaatt gagctgtag cctggagcag atccgtggc tgcagacccc 150

cgccccgtg cctctcccc tgcagccctg ccctcgac tgtgacatgg 200

agagagtgac cctgccctt ctcctactgg caggctgtc tgccttggaa 250

gccaatgacc catttgccaa taaagacgat ccctt act atgactggaa 300

aaacctgcag ctgagcggac tgatctgcgg agggc ctg gccattgctg 350

ggat cgcggc agttctgagt ggcaaatgca aatacaagag cagccagaag 400

cagacagtc ctgtacctga gaaggccatc ccact atca ctccaggctc 450

tgccactact tgctgagcac aggactggcc tccaggatg gcctgaagcc 500

ta actggc cccagc cc tcctcccg ggaggcctta tcctcaagca 550

aggcttctc tccaaggcca ggctgttacg ccctttctg atcaggagcc 600

tcctttatga attaaactcg ccccaccacc ccctca 636

<210> 50
<211> 89
<212> PRT
<213> Homo Sapien

<400> 51
Met Gln Arg Val Thr Leu Ala Leu Leu Leu Leu Ala Gly Leu Thr
1   5   10   15

Ala Leu Glu Ala Asn Asp Pro Phe Ala Asn Lys Asp Asp Pro Phe
            10   15   30

Tyr Tyr Asp Trp Lys Asn Leu Gln Leu Ser Gly Leu Ile Cys Gly
            40   10   45

Gly Leu Leu Ala Ile Ala Gly Ile Ala Ala Val Leu Ser Gly Lys
            50   55   60

Cys Lys Tyr Lys Ser Ser Gln Lys Gln His Ser Pro Val Pro Glu
            65   70   75

Lys Ala Ile Pro Leu Ile Thr Pro Gly Ser Ala Thr Thr Cys
            80   85

<210> 51
<211> 1734
<212> DNA
<213> Homo Sapien

<400> 51
gtggactctg agaagcccag gcagttgagg acacgagaga gaaggctgca 50

ctcccagaga cacggtacggac aaggatccgc aagcgggcgg caacctcgc 100

g acagagac gcagagcaag ggcgggcagg aggagaacct ggtgggagga 150

agacactctg gagagagagg gggctgggca ga atgaagt tccaggagcc 200

63

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cctggcctgc ctcctgctgg ccctctgcct gggcagtggg gaggctggcc 250
ccctgcagag cggagaggaa agcactggga caaatattgg ggaggccctt 300
ggacatggcc tgggagacgc cctgagcgaa ggggtgggaa aggccattgg 350
caaagaggcc ggaggggcag ctggctctaa agtcagtgag gcccttggcc 400
agggggacag agaagcagtt ggcactggag tcaggcaggt tccaggcttt 450
ggccagcag atgctttggg caacagggtc ggggaagcag cccatgctct 500
gggaaacact gggcacgaga ttggcagaca ggcagaagat gtcattcgac 550
acggagcaga tgctgtccgc ggctcctggc agggggtgcc tggccacagt 600
ggttgcttgg aaacttctcg aggccatggc atctttggct ctcaaggtgg 650
cctggaggc caggccaag gcaatcctgg agtctgggg actccgtggg 700
tcctcggata cctcggaaac tcagcaggca gctttggaat gaatcctcag 750
gggtctccct gggggtcaaag aggcaatgga gggccaccaa actttgggac 800
caaactcag gggctgttgg cccagcctgg ctatggttca gtgagagcca 850
gcaaccagaa tgaagggtgc acgaatcccc caccatctgg ctcaggtgga 900
ggctccagca actctggggg aggcagcggc tcacagtcgg gcagcagtgg 950
cagtggcagc aatgctgaca acaacaatgg cacagcagt ggtggcagca 1000
gcagtggcag cagcagtgc agcagcagtg gcggcagcag tgccggcagc 1050
agtggtggca gcagtggcta cagtggtggc accagaggtg acagcggcag 1100
tgagtcctcc tggggatcca gcaccggctc ctcctccggc aaccacggtg 1150
gggcggcg aggaaatgga cataaacccg ggctgtgaaa gccaggaat 1200
gaagccgcg ggagcgggga atctggatt cagggcttca gaggacaggg 1250
agtttccagc aacatgaggg aaataagcaa agagggcaat cgcctccttg 1300
gaggctctg agacaattat cggggcaag ggtcgagctg gggcagtgga 1350
ggaggtgacg ctgttggtgg agtcaatact gtgaactctg agacgtctcc 1400
tgggatctt aactttgaca cttctggaa gaattttaaa tccaagctgg 1450
gtttcatca ctggatgcc ataaacaagg accagagaag ctctcgcatc 1500
ccgtgacc cagacaagga gcaaccagat tggatggag cccccacact 1550
ccctccttaa aacaccaccc tctcatcact aatctcagcc cttgcccttg 1600
aaataaact tagctgccc acaaaaaaa aaaaaaaaa aaaaaaaaa 1650
aaaaaaaaa aaaaaaaa aaaaaaaaa aaaaaa aaaaaaaaa 1700
aaaaaaaaa aaaaaaaaa aaaaaaaaa aaaa 1734
```

64

<210> 5
<211> 440
<212> PRT
<213> Homo Sapien

<400> 5

```
Met Lys Phe Gln Gly Pro Leu Ala Cys Leu Leu Leu Ala Leu Cys
 1               5                  10                      15

Leu Gly Ser Gly Glu Ala Gly Pro Leu Gln Ser Gly Glu Glu Ser
            20                  25                      30

Thr Gly Thr Asn Ile Gly Glu Ala Leu Gly His Gly Leu Gly Asp
            35                  40                      45

Ala Leu Ser Glu Gly Val Gly Lys Ala Ile Gly Lys Glu Ala Gly
            50                  55                      60

Gly Ala Ala Gly Ser Lys Val Ser Glu Ala Leu Gly Gln Gly Thr
            65                  70                      75

Arg Gly Ala Val Gly Thr Gly Val Arg Gln Val Pro Gly Phe Gly
            80                  85                      90

Ala Ala Asp Ala Leu Gly Asn Arg Val Gly Glu Ala Ala His Ala
            95                  100                     105

Leu Gly Asn Thr Gly His Glu Ile Gly Arg Gln Ala Glu Asp Val
            110                 115                     120

Ile Arg His Gly Ala Asp Ala Val Arg Gly Ser Trp Gln Gly Val
            125                 130                     135

Pro Gly His Ser Gly Ala Trp Glu Thr Ser Gly Gly His Gly Ile
            130                 145                     160

Phe Gly Ser Gln Gly Gly Leu Gly Gly Gln Gly Gln Gly Asn Pro
            155                 160                     165

Gly Gly Leu Gly Thr Pro Trp Val His Gly Tyr Pro Gly Asn Ser
            170                 175                     180

Ala Gly Ser Phe Gly Met Asn Pro Gln Gly Ala Pro Trp Gly Gln
            185                 190                     195

Gly Gly Asn Gly Gly Pro Pro Asn Phe Gly Thr Asn Thr Gln Gly
            200                 205                     210

Ala Val Ala Gln Pro Gly Tyr Gly Ser Val Arg Ala Ser Asn Gln
            215                 220                     225

Asn Glu Gly Cys Thr Asn Pro Pro Pro Ser Gly Ser Gly Gly Gly
            230                 235                     240

Ser Ser Asn Ser Gly Gly Gly Ser Gly Ser Gln Ser Gly Ser Ser
            245                 250                     255

Gly Ser Gly Ser Asn Gly Asp Asn Asn Asn Gly Ser Ser Ser Gly
            260                 265                     270

Gly Ser Ser Ser Gly Ser Ser Ser Gly Ser Ser Ser Gly Gly Ser
            275                 280                     285
```

```
Ser Gly Gly Ser Ser Gly Gly Ser Ser Gly Asn Ser Gly Gly Ser
        290             295             300

Arg Gly Asp Ser Gly Ser Glu Ser Ser Trp Gly Ser Ser Thr Gly
        305             310             315

Ser Ser Ser Gly Asn His Gly Gly Ser Gly Gly Gly Asn Gly His
        320             325             330

Lys Pro Gly Cys Glu Lys Pro Gly Asn Glu Ala Arg Gly Ser Gly
        335             340             345

Glu Ser Gly Ile Gln Gly Phe Arg Gly Gln Gly Val Ser Ser Asn
        350             355             360

Met Arg Glu Ile Ser Lys Glu Gly Asn Arg Leu Leu Gly Gly Ser
        365             370             375

Gly Asp Asn Tyr Arg Gly Gln Gly Ser Ser Trp Gly Ser Gly Gly
        380             385             390

Gly Asp Ala Val Gly Gly Val Asn Thr Val Asn Ser Glu Thr Ser
        395             400             405

Pro Gly Met Phe Asn Phe Asp Thr Phe Trp Lys Asn Phe Lys Ser
        410             415             420

Lys Leu Gly Phe Ile Asn Trp Asp Ala Ile Asn Lys Asp Gln Arg
        425             430             435

Ser Ser Arg Ile Pro
        440
```

<210> 52
<211> 1676
<212> DNA
<213> Homo Sapien

<400> 53

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ggagaagagg ttgtgtgga caagctgctc ccgacagaag gatgtcgctg  50
ctgagctgc cctggctggg cctcagaccg gtggcaatgt ccccatggct  100
actcctgctg ctggttgtgg gctcctggct actggccggc atcctggctt  150
ggacctatgc cttctataac aactgccgcc ggctccagtg tttcccacag  200
cccccaaaac ggaactggtt ttggggtcac ctgggcctga tcactcctac  250
agaggagggc ttgaaggact cgacccacat gtcggccacc tattcccagg  300
gccttacggt atggctgggt cccatcatcc ccttcatcgt tttatgccac  350
cctgacacca tcggttctat cacccaatgcc tcagctgcca ttgcacccaa  400
ggataatctc ttcatcaggt tcctgaaccc ctggctggga gaaggatac  450
ngctgagtgg cggtgacaag tggagccgcc accatcggat gctcacgccc  500
ggctttcatt tnnnnnnnn gangcatat aaaatgatct ttantntgt  550
tgcaaacatc atgcttgaca agtggcagca cctggcctca gaggcagca  600
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66

gtcgtctgga catgtttgag cacatcagcc tcatgacctt ggacagtcta 650

caaaaatgca tcttcagctt tgacagccat tgtcagaaga ggcccagtga 700

atatattgcc atcatcttgg agctcagtgc ccttgttgag aaaagaagcc 750

agcatatcct ccagcacatg gacttttctgt attacctctc ccatgacggg 800

cggtgcttcc acagggcctg ccgcctggtg catgacttca cagagctgt 850

catccggggag cggtgtcgca ccctcaccac tcagggtatt gatgattttt 900

tcaaagacaa agccaagtcc aagacttttgg atttcattga tgttgcttctg 950

ctgacaagg atgaagatgg gaaggcattg tcagttgagg atataagagc 1000

agaggctgac accttcattgt ttggaggcca tgacaccacg gccagttgcc 1050

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tgcccttccg gttcctgcca gaccacactg agcccgca gaagctggaa 1550

ttgttcatgc gcgccgaggg cgggctttgg ctgcggtgg agcccctgaa 1600

tgttggcttg cagtgacttt ctgacccatc cacctgtttt tttgcagatt 1650

ctcctgaata aaacggtgct gtcaaa 1676

<3110> 54
<3111> 524
<3112> PRT
<3113> Homo Sapien

<3002> 54
   Met Ser Leu Leu Ser Leu Pro Trp Leu Gly Leu Arg Pro Val Ala
   1   5   10   15

   Met Ser Pro Trp Leu Leu Leu Leu Leu Val Val Gly Ser Trp Leu
                   20   25   30

   Leu Ala Arg Ile Leu Ala Trp Thr Tyr Ala Phe Tyr Asn Asn Cys
                   35   40   45

   Arg Arg Leu Gln Lys Phe Ile Ile Thr Ile Gly Arg Asn Trp Pro
                   50   55   60

   Trp Gly His Leu Gly Leu Ile Thr Pro Thr Glu Glu Gly Leu Lys

Asp Ser Thr Gln Met Ser Ala Thr Tyr Ser Gln Gly Phe Thr Val
          80   85   90

Trp Leu Gly Pro Ile Ile Pro Phe Ile Val Leu Cys His Pro Asp
          95   100   105

Thr Ile Arg Ser Ile Thr Asn Ala Ser Ala Ala Ile Ala Pro Lys
         110   115   120

Asp Asn Leu Phe Leu Arg Phe Leu Lys Pro Trp Leu Gly Glu Gly
         125   130   135

Ile Leu Leu Ser Gly Gly Asp Lys Trp Ser Arg His Arg Arg Met
         140   145   150

Leu Thr Pro Ala Phe His Phe Asn Ile Leu Lys Ser Tyr Ile Thr
         155   160   165

Ile Phe Asn Lys Ser Ala Asn Ile Met Leu Asp Lys Trp Gln His
         170   175   180

Leu Ala Ser Glu Gly Ser Ser Arg Leu Asp Met Phe Glu His Ile
         185   190   195

Ser Leu Met Thr Leu Asp Ser Leu Gln Lys Cys Ile Phe Ser Phe
         200   205   210

Asp Ser His Cys Asn Glu Arg Pro Ser Glu Tyr Ile Ala Thr Ile
         215   220   225

Leu Glu Leu Ser Ala Leu Val Glu Lys Arg Ser Gln His Ile Leu
         230   235   240

Gln His Met Asp His Leu Tyr Tyr Leu Ser His Asp Gly Arg Arg
         245   250   255

Phe His Arg Ala Lys Arg Leu Val His Asp Phe Thr Asp Ala Val
         260   265   270

Ile Arg Glu Arg Arg Arg Thr Leu Pro Thr Gln Gly Ile Asp Asp
         275   280   285

Phe Phe Lys Asp Lys Ala Lys Ser Lys Thr Leu Asp Phe Ile Asp
         290   295   300

Val Leu Leu Leu Ser Lys Asp Glu Asp Gly Lys Ala Leu Ser Asp
         305   310   315

Glu Asp Ile Arg Ala Glu Ala Asp Thr Phe Met Phe Gly Gly His
         320   325   330

Asp Thr Thr Ala Ser Gly Leu Ser Trp Val Leu Tyr Asn Leu Ala
         335   340   345

Arg His Pro Glu Tyr Gln Glu Arg Cys Arg Gln Glu Val Gln
         350   355   360

Leu Leu Lys Asp ... Asp Phe ... ... Arg Asp Arg ...
         365   370   375

Ala Gln Leu Pro Phe Leu Thr Met Cys Val Lys Glu Ser Leu Arg

Leu His Pro Pro Ala Pro Phe Ile Ser Arg Cys Cys Thr Gln Asp
                395   400   405

Ile Val Leu Pro Asp Gly Arg Val Ile Pro Lys Gly Ile Thr Cys
                410   415   420

Leu Ile Asp Ile Ile Gly Val His His Asn Pro Thr Val Trp Pro
                425   430   435

Asp Pro Glu Val Tyr Asp Pro Phe Arg Phe Asp Pro Glu Asn Ser
                440   445   450

Lys Gly Arg Ser Pro Leu Ala Phe Ile Pro Phe Ser Ala Gly Pro
                455   460   465

Arg Asn Cys Ile Gly Gln Ala Phe Ala Met Ala Glu Met Lys Val
                470   475   480

Val Leu Ala Leu Met Leu Leu His Phe Arg Phe Leu Pro Asp His
                485   490   495

Thr Glu Pro Arg Arg Lys Leu Glu Leu Ile Met Arg Ala Glu Gly
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Gly Leu Trp Leu Arg Val Glu Pro Leu Asn Val Gly Leu Gln
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<211> 644
<212> DNA
<213> Homo Sapien

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cttgaactta tcttctgcat tttgcagtct ttggtattga cgtggtacag 200

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tggacagaag ctggtggaca gttttgtaac tatcttcgaa acctctgtct 350

tacagacatg tgccttttat cttgcagcaa tgtgttgctt gtgattcgaa 400

catttgaggg ttacttttgg aagcaacaat acattctcga acctgaatgt 450

cagtagcaca ggatgagaag tgggttctgt atcttgtgga gtggaatctt 500

cctcatgtac ctgtttcctc tctggatgtt gtcccactga attcccatga 550

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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 644

<210> 56
<211> 77

<212> PRT
<213> Homo Sapien

<400> 50
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Met Gly Pro Val Lys Gln Leu Lys Arg Met Phe Glu Pro Thr Arg
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Leu Ile Ala Thr Ile Met Val Leu Leu Cys Phe Ala Leu Thr Leu
            20                  25                      30

Cys Ser Ala Phe Trp Trp His Asn Lys Gly Leu Ala Leu Ile Phe
            35                  40                      45

Cys Ile Leu Gln Ser Leu Ala Leu Thr Trp Tyr Ser Leu Ser Phe
            50                  55                      60

Ile Pro Phe Ala Arg Asp Ala Val Lys Lys Cys Phe Ala Val Cys
            65                  70                      75

Leu Ala
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<210> 51
<211> 3434
<212> DNA
<213> Homo Sapien

<400> 51
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(210) 5F
(211) 469
(212) PRT
(213) Homo Sapien

(400) 5b

Met Leu Cys Leu Cys Leu Tyr Val Pro Val Ile Gly Glu Ala Gln
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Thr Glu Phe Gln Tyr Phe Glu Ser Lys Gly Leu Pro Ala Glu Leu
                                21   30

Lys Ser Ile Phe Lys Leu Ser Val Phe Ile Pro Ser Gln Glu Phe
                                40   45

Ser Tyr Tyr Arg Gln Trp Lys Gln Lys Ile Val Gln Ala Gly Asp
                                55   60

Lys Asp Leu Asp Gly Gln Leu Asp Phe Gly Glu Phe Val His Tyr
                                70   75

Leu Gln Asp His Glu Lys Lys Leu Arg Leu Val Phe Lys Ile Leu
                                                          80

Asp Lys Lys Asn Asp Gly Arg Ile Asp Ala Gln Glu Ile Met Gln
                95   100   105

72

Ser Leu Arg Asp Leu Gly Val Lys Ile Ser Glu Gln Gln Ala Glu
                110   115   120

Lys Ile Leu Lys Ser Met Asp Lys Asn Gly Thr Met Thr Ile Asp
                125   130   145

Trp Asn Glu Trp Arg Asp Tyr His Leu Leu His Pro Val Glu Asn
                140   145   150

Ile Pro Glu Ile Ile Leu Tyr Trp Lys His Ser Thr Ile Phe Asp
                155   160   165

Val Gly Glu Asn Leu Thr Val Pro Asp Glu Phe Thr Val Glu Glu
                170   175   140

Arg Gln Thr Gly Met Trp Trp Arg His Leu Val Ala Gly Gly Gly
                185   190   195

Ala Gly Ala Val Ser Arg Thr Cys Thr Ala Pro Leu Asp Arg Leu
                200   205   210

Lys Val Leu Met Gln Val His Ala Ser Arg Ser Asn Asn Met Gly
                215   220   225

Ile Val Gly Gly Phe Thr Gln Met Ile Arg Glu Gly Gly Ala Arg
                230   235   240

Ser Leu Trp Arg Gly Asn Gly Ile Asn Val Leu Lys Ile Ala Trp
                245   250   255

Glu Ser Ala Ile Lys Phe Met Ala Tyr Glu Gln Ile Lys Arg Leu
                260   265   270

Val Gly Ser Asp Gln Glu Thr Leu Arg Ile His Glu Arg Leu Val
                275   280   285

Ala Gly Ser Leu Ala Gly Ala Ile Ala Gln Ser Ser Ile Tyr Pro
                290   295   300

Met Glu Val Leu Lys Thr Arg Met Ala Leu Arg Lys Thr Gly Gln
                305   310   315

Tyr Ser Gly Met Leu Asp Cys Ala Arg Arg Ile Leu Ala Arg Glu
                320   325   330

Gly Val Ala Ala Ile Tyr Lys Gly Tyr Val Pro Asn Met Leu Gly
                335   340   345

Ile Ile Pro Tyr Ala Gly Ile Asp Leu Ala Val Tyr Glu Thr Leu
                350   355   360

Lys Asn Ala Trp Leu Gln His Tyr Ala Val Asn Ser Ala Asp Trp
                365   370   375

Gly Val Phe Val Leu Leu Ala Cys Gly Thr Met Ser Ser Thr Cys
                380   385   390

Gly Gln Leu Ala Ser Tyr Pro Leu Ala Leu Val Arg Thr Arg Met
                395   400   405

Gln Ala Gln Ala Ser Ile Glu Gly Ala Pro Glu Val Thr Met Ser
                410   415   420

Ser Leu Phe Lys His Ile Leu Arg Thr Glu Gly Ala Phe Gly Leu
            425   430   435

Tyr Arg Gly Leu Ala Pro Asn Phe Met Lys Val Ile Pro Ala Val
            440   445   450

Ser Ile Ser Tyr Val Val Tyr Glu Asn Leu Lys Ile Thr Leu Gly
            455   460   465

Val Gln Ser Arg

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<211> 1058
<212> DNA
<213> Homo Sapien

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atttcaggga gacactccat cacagtcact actgtcgcct cagctgggaa 200

cattgtggag gatggaatcc tgagctgcac ttttgaacct gacatcaaac 250

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ttaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650

aaaaaaaa 1658

<210> 66
<211> 182
<212> PRT
<213> Homo Sapien

<400> 6)
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            20   25   30

Ile Ser Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala
        35   40   45

Gly Asn Ile Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro
        50   55   60

Asp Ile Lys Leu Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly
        65   70   75

Val Leu Gly Leu Val His Glu Phe Lys Glu Gly Lys Asp Glu Leu
        80   85   90

Ser Glu Gln Asp Glu Met Phe Arg Gly Arg Thr Ala Val Phe Ala
            95   100   105

Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu Lys Asn Val
            110   115   120

Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile Thr Ser
        125   130   135

Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala Phe
            140   145   150

Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr
            155   160   165

Leu Arg Cys Glu Ala Pro Arg Trp Phe Pro Gln Pro Thr Val Val

Trp Ala Ser Gln Val Asp Gln Gly Ala Asn Phe Ser Glu Val Ser
      185   190   195

Asn Thr Ser Phe Glu Leu Asn Ser Glu Asn Val Thr Met Lys Val
      200   205   210

Val Ser Val Leu Tyr Asn Val Thr Ile Asn Asn Thr Tyr Ser Cys
      215   220   225

Met Ile Glu Asn Asp Ile Ala Lys Ala Thr Gly Asp Ile Lys Val
      230   235   240

Thr Glu Ser Glu Ile Lys Arg Arg Ser His Leu Gln Leu Leu Asn
      245   250   255

Ser Lys Ala Ser Leu Cys Val Ser Ser Phe Phe Ala Ile Ser Trp
      260   265   270

Ala Leu Leu Pro Leu Ser Pro Tyr Leu Met Leu Lys
      275   280

<210> 61
<211> 1617
<212> DNA
<213> Homo Sapien

<400> 61
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<__ 11__ 2 4
<__ 12__ PRT
<__ 13__ Homo Sapien

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    Gln Ala Pro Gly Ala Pro Pro Gly Ser Tyr Tyr Pro Gly Pro Pro
                20   25   30

    Asn Ser Gly Gly Gln Tyr Gly Ser Gly Leu Pro Pro Gly Gly Gly
                35   40   45

    Tyr Gly Gly Pro Ala Pro Gly Gly Pro Tyr Gly Pro Pro Ala Gly
                50   55   __

    Gly Gly Pro Tyr Gly His Pro Asn Pro Gly Met Phe Pro Ser Gly
                65   70   __

    Phe Pro Gly Gly Pro Tyr Gly Gly Ala Ala Pro Gly Gly Pro Tyr
                80   85   __

    Gly Gln Pro Pro Pro Ser Ser Tyr Gly Ala Gln Gln Pro Gly Leu
                95   100   1_5

    Tyr Gly Gln Gly Gly ___ ___ ___ ___ Val Asp Pro Gln Ala Tyr
                110   115   120

    Ser Trp Phe Gln Ser Val Asp Ser Asp His Ser Gly Tyr Ile Ser

Met Lys Glu Leu Lys Gln Ala Leu Val Asn Cys Asn Trp Ser Ser
        140   145

Phe Asn Asp Glu Thr Cys Leu Met Met Ile Asn Met Phe Asp Lys
        155   160   165

Thr Lys Ser Gly Arg Ile Asp Val Tyr Gly Phe Ser Ala Leu Trp
        170   175   180

Lys Phe Ile Gln Gln Trp Lys Asn Leu Phe Gln Gln Tyr Asp Arg
        185   190   195

Asp Arg Ser Gly Ser Ile Ser Tyr Thr Glu Leu Gln Gln Ala Leu
        200   205   210

Ser Gln Met Gly Tyr Asn Leu Ser Pro Gln Phe Thr Gln Leu Leu
        215   220   225

Val Ser Arg Tyr Cys Pro Arg Ser Ala Asn Pro Ala Met Gln Leu
        230   235   240

Asp Arg Phe Ile Gln Val Cys Thr Gln Leu Gln Val Leu Thr Glu
        245   250   255

Ala Phe Arg Gln Lys Asp Thr Ala Val Gln Gly Asn Ile Arg Leu
        260   265   270

Ser Phe Glu Asp Phe Val Thr Met Thr Ala Ser Arg Met Leu
        275   280

<210> 67
<211> 1734
<212> DNA
<213> Homo Sapien

<400> 67
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aggttcctcc actggcccct ctaactctga acatccgcag cccgctctgg 200

aacctatgtc taatgacttg gcaagggttc ctctgaagct cagcgtgcct 250

ccatcagatg gcttcccacc tgcaggaggt tctgcagtgc agaggtggcc 300

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cttactct cccggggt tcggagtcca gacgactacc ccgttctaat 550

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catccacagg gttctgcctg atcaccccta gggtaccctg aatcccagtg 650

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aaaaaaaaa aaaaaaaca aaaaaaaaaa aaaaacaaaa aaaaaaaaaa 1200

aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1234

<210> 64
<211> 325
<212> PRT
<213> Homo Sapien

<400> 64
Met Gln Gly Arg Val Ala Gly Ser Cys Ala Pro Leu Gly Leu Leu
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Leu Val Cys Leu His Leu Pro Gly Leu Phe Ala Arg Ser Ile Gly
                20   25   30

Val Val Glu Glu Lys Val Ser Gln Asn Phe Gly Thr Asn Leu Pro
            35   40   45

Gln Leu Gly Gln Pro Ser Ser Thr Gly Pro Ser Asn Ser Glu His
                50   55   60

Pro Gln Pro Ala Leu Asp Pro Arg Ser Asn Asp Leu Ala Arg Val
            65   70   75

Pro Leu Lys Leu Ser Val Pro Pro Ser Asp Gly Phe Pro Pro Ala
            80   85   90

Gly Gly Ser Ala Val Gln Arg Trp Pro Pro Ser Trp Gly Leu Pro
                95   100   105

Ala Met Asp Ser Trp Pro Pro Glu Asp Pro Trp Gln Met Met Ala
                110   115   120

Ala Ala Ala Glu Asp Arg Leu Gly Glu Ala Leu Pro Glu Glu Leu
                125   130   135

Ser Tyr Leu Ser Ser Ala Ala Ala Leu Ala Pro Gly Ser Gly Pro
                140   145   150

Leu Pro Gly Glu Ser Ser Pro Asp Ala Thr Gly Leu Ser Pro Glu
                155   160   165

79

Ala Ser Leu Leu His Gln Asp Ser Glu Ser Arg Arg Leu Pro Arg
                170   175   180

Ser Asn Ser Leu Gly Ala Gly Gly Lys Ile Leu Ser Gln Arg Pro
                185   190   195

Pro Trp Ser Leu Ile His Arg Val Leu Pro Asp His Pro Trp Gly
                200   205   210

Thr Leu Asn Pro Ser Val Ser Trp Gly Gly Gly Gly Pro Gly Thr
                215   220   225

Gly Trp Gly Thr Arg Pro Met Pro His Pro Glu Gly Ile Trp Gly
                230   235   240

Ile Asn Asn Gln Pro Pro Gly Thr Ser Trp Gly Asn Ile Asn Arg
                245   250   255

Tyr Pro Gly Gly Ser Trp Gly Asn Ile Asn Arg Tyr Pro Gly Gly
                260   265   270

Ser Trp Gly Asn Ile Asn Arg Tyr Pro Gly Gly Ser Trp Gly Asn
                275   280   285

Ile His Leu Tyr Pro Gly Ile Asn Asn Pro Phe Pro Pro Gly Thr
                290   295   300

Leu Arg Pro Pro Gly Ser Ser Trp Asn Ile Pro Ala Gly Phe Pro
                305   310   315

Asn Pro Pro Ser Pro Arg Leu Gln Trp Gly
                320   325

<210> 65
<211> 412
<212> DNA
<213> Homo Sapien

<400> 65
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gcagctcaca tggaacaggg ccgggtatga cttggaact gaagctgaag 150

gagtcttttc tgacaaattc ctcctatgag tccagcttcc tggaattgct 200

tgaaaagctc tgcctcctcc tccatctcc ttcagggacc agggtcacccc 250

tccaccatgc aagatctcaa caccatgttg tctgcaacac atgacagcca 300

ttgaagctg tgtcctcctt ggccgggct ttgggcggg ggatgcagga 350

ggaggcccc gacctgtcc ttcagcagc ccacccctc ctgagtggca 400

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<210> 66
<211> 73
<212> PRT
<213> Homo Sapien

<210> 66

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Met Gly Ser Gly Leu Pro Leu Val Leu Leu Leu Thr Leu Leu Gly
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Ser Ser His Gly Thr Gly Pro Gly Met Thr Leu Gln Leu Lys Leu
                20                  25                  30

Lys Glu Ser Phe Leu Thr Asn Ser Ser Tyr Glu Ser Ser Phe Leu
                45                  40                  45

Glu Leu Leu Glu Lys Leu Cys Leu Leu Leu His Leu Pro Ser Gly
                50                  55                  60

Thr Ser Val Thr Leu His His Ala Arg Ser Gln His His Val Val
                65                  70                  75

Cys Asn Thr
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<210> 67
<211> 744
<212> DNA
<213> Homo Sapien

<400> 67

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cctgccgctc ctgctggcc gctggggccg agcctggggg caaatacaga  250

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<210> 68
<211> 123
<212> PRT
<213> Homo Sapien

<400> 68

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Met Ala Asn Pro Gly Leu Gly Leu Leu Leu Ala Leu Gly Leu Pro
 1               5                  10                  15
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Phe Leu Leu Ala Arg Trp Gly Arg Ala Trp Gly Gln Ile Gln Thr
          20   25   30

Thr Ser Ala Asn Glu Asn Ser Thr Val Leu Pro Ser Ser Thr Ser
          35   40   45

Ser Ser Ser Asp Gly Asn Leu Arg Pro Glu Ala Ile Thr Ala Ile
          50   55   60

Ile Val Val Phe Ser Leu Leu Ala Ala Leu Leu Leu Ala Val Gly
          65   70   75

Leu Ala Leu Leu Val Arg Lys Leu Arg Glu Lys Arg Gln Thr Glu
          80   85   90

Gly Thr Tyr Arg Pro Ser Ser Glu Glu Gln Phe Ser His Ala Ala
          95   100   105

Glu Ala Arg Ala Pro Gln Asp Ser Lys Glu Thr Val Gln Gly Cys
          110   115   120

Leu Pro Ile

<210> 69
<211> 3365
<212> DNA
<213> Homo Sapien

<400> 69
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tgaataataa tggcttgaa gatattgtca ttgttataga tcctagtgtg 150

ccagaagatg aaaaaaatat tgaacaaata gaggatatgg tgactacagc 200

ttctaagtac ctgtttgaag ccacagaaaa aagatttttt ttcaaaaatg 250

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ccaaaacatg aaaaccataa acatgctgat gttatagttg caccacctac 350

actccaggt agagatgaac catacaccaa gcagttcaca gaatgtggag 400

agaaaggcga atacattcac ttcacccctg accttctact tggaaaaaaa 450

caaaatgaat atggactacc aggcaaactg tttgtccatg agtgggctca 500

cctccggtgg ggagtgtttg atgagtacaa tgaagatcag cctttctact 550

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ggtagaaata gagtttataa gtgtcaagga ggcagctgtc ttagtagagc 650

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agttcttgat aagtctggaa gcatgggggg taaggaccgc ctaaatcgaa 1000

tgaatcaagc agcaaaacat ttcctgctgc agactgttga aaatggatcc 1050

tgggtgggga tggttcactt tgatagtact gccactattg taaataagct 1100

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tgaaacaaag tggggccatt gttcatttta ttgtttggg aagagctgct 1350

gatgaagcag taatagagat gagcaagata acaggaggaa gtcattttta 1400

tgtttcagat gaagctcaga acaatggcct catgatgct tttgggctc 1450

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gatttttaaa attgcatcaa gaaattaaaa tcatctatct gagtagtcaa 3150

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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3250

aaaaaaaaaa aaaaa 3265

<210> 70
<211> 919
<212> PRT
<213> Homo Sapien

<400> 70
Met Gly Leu Phe Arg Gly Phe Val Phe Leu Leu Val Leu Cys Leu
1   5   10   15

Leu His Gln Ser Asn Thr Ser Phe Ile Lys Leu Asn Asn Asn Gly
            20   25   30

Phe Glu Asp Ile Val Ile Val Ile Asp Pro Ser Val Pro Glu Asp
            35   40   45

Glu Lys Ile Ile Glu Gln Ile Glu Asp Met Val Thr Thr Ala Ser
            50   55   60

Thr Tyr Leu Phe Glu Ala Thr Glu Lys Arg Phe Phe Phe Lys Asn
            65   70   75

Val Ser Ile Leu Ile Pro Glu Asn Ile Lys Glu Asn Pro Thr Tyr
            80   85   90

Lys Arg Pro Lys His Glu Asn His Lys His Ala Asp Val Ile Val
            95   100   105

84

Ala Pro Pro Thr Leu Pro Gly Arg Asp Glu Pro Tyr Thr Lys Gln
          110   115   120

Phe Thr Glu Cys Gly Glu Lys Gly Glu Tyr Ile His Phe Thr Pro
          125   130   135

Asp Leu Leu Leu Gly Lys Lys Gln Asn Glu Tyr Gly Pro Pro Gly
          140   145   150

Lys Leu Phe Val His Glu Trp Ala His Leu Arg Trp Gly Val Phe
          155   160   165

Asp Glu Tyr Asn Glu Asp Gln Pro Phe Tyr Arg Ala Lys Ser Lys
          170   175   180

Lys Ile Glu Ala Thr Arg Cys Ser Ala Gly Ile Ser Gly Arg Asn
          185   190   195

Arg Val Tyr Lys Cys Gln Gly Gly Ser Cys Leu Ser Arg Ala Cys
          200   205   210

Arg Ile Asp Ser Thr Thr Lys Leu Tyr Gly Lys Asp Cys Gln Phe
          215   220   225

Phe Pro Asp Lys Val Gln Thr Glu Lys Ala Ser Ile Met Phe Met
          230   235   240

Gln Ser Ile Asp Ser Val Val Glu Phe Cys Asn Glu Lys Thr His
          245   250   255

Asn Gln Glu Ala Trp Ser Leu Gln Asn Ile Lys Cys Asn Phe Arg
          260   265   270

Ser Thr Trp Glu Val Ile Ser Asn Ser Glu Asp Phe Lys Asn Thr
          275   280   285

Ile Pro Met Val Thr Pro Pro Pro Pro Val Phe Ser Leu Leu
          290   295   300

Lys Ile Ser Gln Arg Ile Val Cys Leu Val Leu Asp Lys Ser Gly
          305   310   315

Ser Met Gly Gly Lys Asp Arg Leu Asn Arg Met Asn Gln Ala Ala
          320   325   330

Lys His Phe Leu Leu Gln Thr Val Glu Asn Gly Ser Trp Val Gly
          335   340   345

Met Val His Phe Asp Ser Thr Ala Thr Ile Val Asn Lys Leu Ile
          350   355   360

Gln Ile Lys Ser Ser Asp Glu Arg Asn Thr Leu Met Ala Gly Leu
          365   370   375

Pro Thr Tyr Pro Leu Gly Gly Thr Ser Ile Cys Ser Gly Ile Lys
          380   385   390

Tyr Ala Phe Gln Val Pro Gly Glu Leu His Ser Gln Leu Asn Gly
          395   400   405

Ser Glu Val Leu Leu Leu Thr Asp Gly Glu Asp Asn Thr Ala Ser
          410   415   420

85

Ser Cys Ile Asp Glu Val Lys Gln Ser Gly Ala Ile Val His Phe
425   430   435

Ile Ala Leu Gly Arg Ala Ala Asp Glu Ala Val Ile Glu Met Ser
440   445   450

Lys Ile Thr Gly Gly Ser His Phe Tyr Val Ser Asp Glu Ala Gln
455   460   465

Asn Asn Gly Leu Ile Asp Ala Phe Gly Ala Leu Thr Ser Gly Asn
470   475   480

Thr Asp Leu Ser Gln Lys Ser Leu Gln Leu Glu Ser Lys Gly Leu
485   490   495

Thr Leu Asn Ser Asn Ala Trp Met Asn Asp Thr Val Ile Ile Asp
500   505   510

Ser Thr Val Gly Lys Asp Thr Phe Phe Leu Ile Thr Trp Asn Ser
515   520   525

Leu Pro Pro Ser Ile Ser Leu Trp Asp Pro Ser Gly Thr Ile Met
530   535   540

Glu Asn Phe Thr Val Asp Ala Thr Ser Lys Met Ala Tyr Leu Ser
545   550   555

Ile Pro Gly Thr Ala Lys Val Gly Thr Trp Ala Tyr Asn Leu Gln
560   565   570

Ala Lys Ala Asn Pro Glu Thr Leu Thr Leu Thr Val Thr Ser Arg
575   580   585

Ala Ala Asn Ser Ser Val Pro Pro Ile Thr Val Asn Ala Lys Met
590   595   600

Asn Lys Asp Val Asn Ser Phe Pro Ser Pro Met Ile Val Tyr Ala
605   610   615

Glu Ile Leu Gln Gly Tyr Val Pro Val Leu Gly Ala Asn Val Thr
620   625   630

Ala Phe Ile Glu Ser Gln Asn Gly His Thr Glu Val Leu Glu Leu
635   640   645

Leu Asp Asn Gly Ala Gly Ala Asp Ser Ile Lys Asn Asp Gly Val
650   655   660

Tyr Ser Arg Tyr Phe Thr Ala Tyr Thr Leu Asn Gly Arg Tyr Ser
665   670   675

Leu Lys Val Arg Ala His Gly Gly Ala Asn Thr Ala Arg Leu Lys
680   685   690

Leu Arg Pro Pro Leu Asn Arg Ala Ala Tyr Ile Pro Gly Trp Val
695   700   705

Val Asn Gly Glu Ile His Asn Asn Pro Thr Arg Phe Thr Ile Trp
710   715

Glu Asp Thr Gln Thr Thr Leu Glu Asp Phe Ser Arg Thr Ala Ser
725   730   735

Gly Gly Ala Phe Val Val Ser Gln Val Pro Ser Leu Pro Leu Pro
              740   745   750

Asp Gln Tyr Pro Pro Ser Gln Ile Thr Asp Leu Asp Ala Thr Val
              755   760   765

His Glu Asp Lys Ile Ile Leu Thr Trp Thr Ala Pro Gly Asp Asn
              770   775   780

Phe Asp Val Gly Lys Val Gln Arg Tyr Ile Ile Arg Ile Ser Ala
              785   790   795

Ser Ile Leu Asp Leu Arg Asp Ser Phe Asp Asp Ala Leu Gln Val
              800   805   810

Asn Thr Thr Asp Leu Ser Pro Lys Glu Ala Asn Ser Lys Glu Ser
              815   820   825

Phe Ala Phe Lys Ile Glu Asn Ile Ser Gln Glu Asn Ala Thr His
              830   835   840

Ile Phe Ile Ala Ile Lys Ser Ile Asp Lys Ser Asn Leu Thr Ser
              845   850   855

Lys Val Ser Asn Ile Ala Gln Val Thr Leu Phe Ile Pro Gln Ala
              860   865   870

Asn Pro Asp Asp Ile Asp Pro Thr Pro Thr Pro Thr Pro Thr Pro
              875   880   885

Thr Pro Asp Lys Ser His Asn Ser Gly Val Asn Ile Ser Thr Leu
              890   895   900

Val Leu Ser Val Ile Gly Ser Val Val Ile Val Asn Phe Ile Leu
              905   910   915

Ser Thr Thr Ile

<210> 71
<211> 3877
<212> DNA
<213> Homo Sapien

<400> 71
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<210> 72
<211> 532
<212> PRT
<213> Homo Sapien

<400> 72

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Val Val Leu Leu Val Leu Leu Cys Cys Ala Ile Ser Val Leu Tyr
         20              25              30

Met Leu Ala Cys Thr Pro Lys Gly Asp Glu Glu Gln Leu Ala Leu
         35              40              45

Pro Arg Ala Asn Ser Pro Thr Gly Lys Glu Gly Tyr Gln Ala Val
         50              55              60

Leu Gln Glu Trp Glu Glu Gln His Arg Asn Tyr Val Ser Ser Leu
     65              70              75

Lys Arg Gln Ile Ala Gln Leu Lys Glu Glu Leu Gln Glu Arg Ser
     80              85              90

Glu Gln Leu Arg Asn Gly Gln Tyr Gln Ala Ser Asp Ala Ala Gly
     95              100             105

Leu Gly Leu Asp Arg Ser Pro Pro Glu Lys Thr Gln Ala Asp Leu
         110             115             120

Leu Ala Phe Leu His Ser Gln Val Asp Lys Ala Glu Val Asn Ala
         125             130             135

Gly Val Lys Leu Ala Thr Glu Tyr Ala Ala Val Pro Phe Asp Ser
         140             145             150

Phe Thr Leu Gln Lys Val Tyr Gln Leu Glu Thr Gly Leu Thr Arg
         155             160             165

His Pro Glu Glu Lys Pro Val Arg Lys Asp Lys Arg Asp Glu Leu
         170             175             180

Val Glu Ala Ile Gly Ser Ala Leu Glu Thr Leu Asn Asn Pro Ala
         185             190             195

Glu Asn Gly Leu Asn His Arg Pro Tyr Tyr Ala Ser Asp Phe Ile
         200             205             210

Glu Gly Ile Tyr Arg Thr Glu Arg Asp Lys Gly Thr Leu Tyr Glu
         215             220             225
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90

Leu Thr Phe Lys Gly Asp His Lys His Glu Phe Lys Arg Leu Ile
          230   235   240

Leu Phe Arg Pro Phe Ser Pro Ile Met Lys Val Lys Asn Glu Lys
          245   250   255

Leu Asn Met Ala Asn Thr Leu Ile Asn Val Ile Val Pro Leu Ala
          260   265   270

Lys Arg Val Asp Lys Phe Arg Gln Phe Met Gln Asn Phe Arg Glu
          275   280   285

Met Cys Ile Glu Gln Asp Gly Arg Val His Leu Thr Val Val Tyr
          290   295   300

Phe Gly Lys Glu Gln Ile Asn Glu Val Lys Gly Ile Leu Glu Asn
          305   310   315

Thr Ser Lys Ala Ala Asn Phe Arg Asn His Thr Phe Ile Gln Leu
          320   325   330

Asn Gly Glu Phe Ser Arg Gly Lys Gly Leu Asp Val Gly Ala Arg
          335   340   345

Phe Trp Lys Gly Ser Asn Val Leu Leu Phe Phe Cys Asp Val Asp
          350   355   360

Ile Tyr Phe Thr Ser Glu Phe Leu Asn Thr Cys Arg Leu Asn Thr
          365   370   375

Gln Pro Gly Lys Lys Val Phe Tyr Pro Val Leu Phe Ser Gln Tyr
          380   385   390

Asn Pro Gly Ile Ile Tyr Gly His His Asp Ala Val Pro Pro Leu
          395   400   405

Glu Gln Gln Leu Thr Ile Lys Lys Glu Thr Gly Phe Trp Arg Asp
          410   415   420

Phe Gly Phe Gly Met Thr Cys Gln Tyr Arg Ser Asp Phe Ile Asn
          425   430   435

Ile Gly Gly Phe Asp Leu Asp Ile Lys Gly Trp Gly Gly Glu Asp
          440   445   450

Val His Leu Tyr Arg Lys Tyr Leu His Ser Asn Leu Ile Val Val
          455   460   465

Arg Thr Pro Val Arg Gly Leu Phe His Leu Trp His Gln Lys Arg
          470   475   480

Cys Met Asp Glu Leu Thr Pro Glu Gln Tyr Lys Met Cys Met Gln
          485   490   495

Ser Lys Ala Met Asn Glu Ala Ser His Gly Gln Leu Gly Met Leu
          500   505   510

Val Phe Arg His Gln Ile Glu Ala His Leu Arg Lys Gln Lys Gln
          515   520   525

Lys Thr Ser Ser Lys Lys Thr
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<210> 73
<211> 1701
<212> DNA
<213> Homo Sapien

<220>
<221> unsure
<222> 1528
<223> unknown base

<400> 73

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92

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gaagttgtat atttttgatc aatatatttg gaaataaag tttctgactt 1700

t 1701

<210> 74
<211> 337
<212> PRT
<213> Homo Sapien

<400> 74

Met Leu Phe Ser Ala Leu Leu Leu Glu Val Ile Trp Ile Leu Ala
1   5   10   15

Ala Asp Gly Gly Gln His Trp Thr Tyr Glu Gly Pro His Gly Gln
            20   25   30

Asp His Trp Pro Ala Ser Tyr Pro Glu Cys Gly Asn Asn Ala Gln
            35   40   45

Ser Pro Ile Asp Ile Gln Thr Asp Ser Val Thr Phe Asp Pro Asp
            50   55   60

Leu Pro Ala Leu Gln Pro His Gly Tyr Asp Gln Pro Gly Thr Glu
            65   70   75

Pro Leu Asp Leu His Asn Asn Gly His Thr Val Gln Leu Ser Leu
            80   85   90

Pro Ser Thr Leu Tyr Leu Gly Gly Leu Pro Arg Lys Tyr Val Ala
            95   100   105

Ala Gln Leu His Leu His Trp Gly Gln Lys Gly Ser Pro Gly Gly
            110   115   120

Ser Glu His Gln Ile Asn Ser Glu Ala Thr Phe Ala Glu Leu His
            125   130   135

Ile Val His Tyr Asp Ser Asp Ser Tyr Asp Ser Leu Ser Glu Ala
            140   145   150

Ala Glu Arg Pro Gln Gly Leu Ala Val Leu Gly Ile Leu Ile Glu
            155   160   165

Val Gly Glu Thr Lys Asn Ile Ala Tyr Leu His Ile Leu Ser His
            170   175   180

Leu His Glu Val Arg His Lys Asp Gln Lys Thr Ser Val Pro Pro
            185   190   195

93

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Phe Asn Leu Arg Glu Leu Leu Pro Lys Gln Leu Gly Gln Tyr Phe
            200               205                   210

Arg Tyr Asn Gly Ser Leu Thr Thr Pro Pro Cys Tyr Gln Ser Val
            215               220                   225

Leu Trp Thr Val Phe Tyr Arg Arg Ser Gln Ile Ser Met Glu Gln
            230               235                   240

Leu Glu Lys Leu Gln Gly Thr Leu Phe Ser Thr Glu Glu Glu Pro
            245               250                   255

Ser Lys Leu Leu Val Gln Asn Tyr Arg Ala Leu Gln Pro Leu Asn
            260               265                   270

Gln Arg Met Val Phe Ala Ser Phe Ile Gln Ala Gly Ser Ser Tyr
            275               280                   285

Thr Thr Gly Glu Met Leu Ser Leu Gly Val Gly Ile Leu Val Gly
            290               295                   300

Cys Leu Cys Leu Leu Leu Ala Val Tyr Phe Ile Ala Arg Lys Ile
            305               310                   315

Arg Lys Lys Arg Leu Glu Asn Arg Lys Ser Val Val Phe Thr Ser
            320               325                   330

Ala Gln Ala Thr Thr Glu Ala
            335
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tccatctacc gatatatcca ccttggcaaa gagaaacacc cagcaaattt 650
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ccttaatgat cctcagccca gcgggaacct gaggccccct caggaggaag 850

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gattctgaag aaaacacgga aggtacttct ctcacccagc aagagtccct 950

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tcagaaccac tgacatttgt gcggggcctg aagagcagga gctcagtttg 1050

caggaggagg tatccacaca aggaacatta ttggagtcgc aggcagcgtt 1100

gggagtctg gtccggcaaa cgttacagta ctcatacacc cctcagctcc 1150

aagacttaga cccctgcg caggagtaca cagactcgga ggagggccg 1200

caggaagagc catcgatgac cctggtcgac tgggatcccc aaactggcag 1250

gctgtgtatt ccttcgctgt ccagcttcga ccaggattca gaggggtcg 1300

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<210> 76
<211> 442
<212> PRT
<213> Homo Sapien

<400> 76
Met Ser Tyr Asn Gly Leu His Gln Arg Val Phe Lys Glu Leu Lys
1   5   10   15

Leu Leu Thr Leu Cys Ser Ile Ser Ser Gln Ile Gly Pro Pro Glu
            20   25   30

Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr
            35   40   45

Ala Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu Pro Val Ser
        50   55   60

Met Gln Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser Val Leu

95

Asn Thr Lys Ser Asn Arg Thr Trp Ser Gln Cys Val Thr Asn His
80

Thr Leu Val Leu Thr Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val
95 100 105

His Val Glu Ser Phe Val Pro Gly Pro Pro Arg Arg Ala Gln Pro
110 115 120

Ser Glu Lys Gln Cys Ala Arg Thr Leu Lys Asp Gln Ser Ser Gln
125 130 135

Phe Lys Ala Lys Ile Ile Phe Trp Tyr Val Leu Pro Ile Ser Ile
140 145 150

Thr Val Phe Leu Phe Ser Val Met Gly Tyr Ser Ile Tyr Arg Tyr
155 160 165

Ile His Val Gly Lys Glu Lys His Pro Ala Asn Leu Ile Leu Ile
170

Tyr Gly Asn Glu Phe Asp Lys Arg Phe Phe Val Pro Ala Glu Lys
185 190 195

Ile Val Ile Asn Phe Ile Thr Leu Asn Ile Ser Asp Asp Ser Lys
200

Ile Ser His Gln Asp Met Ser Leu Leu Gly Lys Ser Ser Asp Val
215

Ser Ser Leu Asn Asp Pro Gln Pro Ser Gly Asn Leu Arg Pro
230

Gln Glu Glu Glu Glu Val Lys His Leu Gly Tyr Ala Ser His

Met Glu Ile Phe Lys Asp Ser Glu Glu Asn Thr Glu Gly Thr

Leu Thr Gln Gln Gln Ser Leu Ser Arg Thr Ile Pro Pro Asp Lys

Thr Val Ile Glu Tyr Glu Tyr Asp Val Arg Thr Thr Asp Ile Lys

Ala Gly Pro Glu Glu Gln Glu Leu Ser Leu Gln Glu Glu Val Ser

Thr Gln Gly Thr Leu Leu Glu Ser Gln Ala Ala Leu Ala Val Leu

Gly Pro Gln Thr Leu Gln Tyr Ser Tyr Thr Pro Gln Leu Gln Asp

Leu Asp Pro Leu Ala Gln Glu His Thr Asp Ser Glu Glu Gly Pro

Gly Glu Glu Pro Ser Thr Thr Leu Val Asp Trp Asp Pro Gln

Gly Arg Leu Cys Ile Pro Ser Leu Ser Ser Phe Asp Gln Asp Ser

Glu Gly Cys Glu Pro Ser Glu Gly Asp Gly Leu Gly Glu Glu Gly
            395   400   405

Leu Leu Ser Arg Leu Tyr Glu Glu Pro Ala Pro Asp Arg Pro Pro
            410   415   420

Gly Glu Asn Glu Thr Tyr Leu Met Gln Phe Met Glu Glu Trp Gly
            425   430   435

Leu Tyr Val Gln Met Glu Asn
            440

<210> 77
<211> 1636
<212> DNA
<213> Homo Sapien

<400> 77
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tgtagttctc atcctcgcc caaaagtcat caaagaaaag ctgacacagg   200

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agtgccatgc gggaaagcc agccggacgc atcctgtgc tgggcagcct   300

ggtgaacacc gtcctgcaagc acatcatctg gctgaaggtc atcacagcta   350

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accagccatg ggagctgcg catccaactg ctgtataagc tctccttcct   600

gctgaacgcc ttagctaagc agttcatgaa cctcctagtg ccatccctgc   650

ctatctagt gaaaaaccag ctgtgtcccg tgatcgaggc ttccttcaat   700

ggcatgtatg cagaactcct gcagctggtg aagtgcccca tttccctcag   750

cattgacccgt ctggatttg accttctgta tcctgccatc aagggtgaca   800

ccattcagct ctacctgggg gccaagttgt tggactcaca gggaaagtg   850

accaagtggt tcaataactc tgcagcttc ctgacaatgc ccaccctgga   900

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gatctggggt cccagtgtca ttggtgaagg ccttgggatt cgaggcagct 1450

gagtcctcac tgaccaagga tgcccttgtg cttactccag cctccttgtg 1500

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agaaggctgg gtcccagctg ggagtatggg tgtgagctct atagaccatc 1600

cctctctgca atcaataaac acttgcctgt gaaaaa 1636

<210> 78
<211> 484
<212> PRT
<213> Homo Sapien

<400> 78
Met Ala Gly Pro Trp Thr Phe Thr Leu Leu Cys Gly Leu Leu Ala
1   5   10   15

Ala Thr Leu Ile Gln Ala Thr Leu Ser Pro Thr Ala Val Leu Ile
        20   25   30

Leu Gly Pro Lys Val Ile Lys Glu Lys Leu Thr Gln Glu Leu Lys
        35   40   45

Asp His Asn Ala Thr Ser Ile Leu Gln Gln Leu Pro Leu Leu Ser
        50   55   60

Ala Met Arg Glu Lys Pro Ala Gly Gly Ile Pro Val Leu Gly Ser
        65   70   75

Leu Val Asn Thr Val Leu Lys His Ile Ile Trp Leu Lys Val Ile
        80   85   90

Thr Ala Asn Ile Leu Gln Leu Gln Val Lys Pro Ser Ala Asn Asp
        95   100   105

Gln Glu Leu Leu Val Lys Ile Pro Leu Asp Met Val Ala Gly Phe
        110   115   120

Asn Thr Pro Leu Val Lys Thr Ile Val Glu Phe His Met Thr Thr
        125   130   135

Glu Ala Gln Ala Thr Ile Arg Met Asp Thr Ser Ala Ser Gly Pro
        140   145   150

Thr Arg Leu Val Leu Ser Asp Tyr Ala Thr Ser Gly Ser Leu
        155   160   165

Arg Ile Gln Leu Leu Tyr Lys Leu Ser Phe Leu Val Asn Ala Leu

98

Ala Lys Gln Val Met Asn Leu Leu Val Pro Ser Leu Pro Asn Leu
185   190   195

Val Lys Asn Gln Leu Cys Pro Val Ile Glu Ala Ser Phe Asn Gly
200   205   210

Met Tyr Ala Asp Leu Leu Gln Leu Val Lys Val Pro Ile Ser Leu
215   220   225

Ser Ile Asp Arg Leu Glu Phe Asp Leu Leu Tyr Pro Ala Ile Lys
230   235   240

Gly Asp Thr Ile Gln Leu Tyr Leu Gly Ala Lys Leu Leu Asp Ser
245   250   255

Gln Gly Lys Val Thr Lys Trp Phe Asn Asn Ser Ala Ala Ser Leu
260   265   270

Thr Met Pro Thr Leu Asp Asn Ile Pro Ile Ser Leu Ile Val Ser
275   280   285

Gln Asp Val Val Lys Ala Ala Val Ala Ala Val Leu Ser Pro Glu
290   295   300

Glu Phe Met Val Leu Leu Asp Ser Val Leu Pro Glu Ser Ala His
305   310   315

Arg Leu Lys Ser Ser Ile Gly Leu Ile Asn Glu Lys Ala Ala Asp
320   325   330

Lys Leu Gly Ser Thr Gln Ile Val Lys Ile Leu Thr Gln Asp Thr
335   340   345

Pro Glu Phe Phe Ile Asp Gln Gly His Ala Lys Val Ala Gln Leu
350   355   360

Ile Val Leu Glu Val Phe Pro Ser Ser Glu Ala Leu Arg Pro Leu
365   370   375

Phe Thr Leu Gly Ile Glu Ala Ser Ser Glu Ala Gln Phe Tyr Thr
380   385   390

Lys Gly Asp Gln Leu Ile Leu Asn Leu Asn Asn Ile Ser Ser Asp
395   400   405

Arg Ile Gln Leu Met Asn Ser Gly Ile Gly Trp Phe Gln Pro Asp
410   415   420

Val Leu Lys Asn Ile Ile Thr Glu Ile Ile His Ser Ile Leu Leu
425   430   435

Pro Asn Gln Asn Gly Lys Leu Arg Ser Gly Val Pro Val Ser Leu
440   445   450

Val Lys Ala Leu Gly Phe Glu Ala Ala Glu Ser Ser Leu Thr Lys
455   460   465

Asp Ala Leu Val Leu Thr Ile Ala Ser Leu Arg Lys Ile Ser Leu
470   475   480

Pro Val Ser Gln

<400> 79

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tcccagctg gaaaacaagt tcttatgtcg gtgccagcat tgtgacagca 250

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<210> 30
<211> 230
<212> PRT
<213> Homo Sapien

<400> 30
Met Ala Ser Leu Gly Leu Gln Leu Val Gly Tyr Ile Leu Gly Leu
1   5   10   15

Leu Gly Leu Leu Gly Thr Leu Val Ala Met Leu Leu Pro Ser Trp
            20   25   30

Lys Thr Ser Ser Tyr Val Gly Ala Ser Ile Val Thr Ala Val Gly
            35   40   45

Phe Ser Lys Gly Leu Trp Met Glu Cys Ala Thr His Ser Thr Gly
                    50   60

Ile Thr Gln Cys Asp Ile Tyr Ser Thr Leu Leu Gly Leu Pro Ala
            65   70   75

Asp Ile Gln Ala Ala Gln Ala Met Met Val Thr Ser Ser Ala Ile
            80   85   90

Ser Ser Leu Ala Cys Ile Ile Ser Val Val Gly Met Arg Cys Thr
            95   100   105

Val Phe Cys Gln Glu Ser Arg Ala Lys Asp Arg Val Ala Val Ala
            110   115   120

Gly Gly Val Phe Pro Ile Leu Gly Gly Leu Leu Gly Phe Ile Pro
            125   130   135

Val Ala Trp Asn Leu His Gly Ile Leu Arg Asp Phe Tyr Ser Pro
            140   145   150

Leu Val Pro Asp Ser Met Lys Phe Glu Ile Gly Glu Ala Leu Tyr
            155   160   165

Leu Gly Ile Ile Ser Ser Leu Phe Ser Leu Ile Ala Gly Ile Ile
            170   175   180

Leu Cys Phe Ser Cys Ser Ser Gln Arg Asn Arg Ser Asn Tyr Tyr
            185   190   195

Asp Ala Tyr Gln Ala Gln Pro Leu Ala Thr Arg Ser Ser Pro Arg
            200   205   210

Pro Gly Gln Pro Pro Lys Val Lys Ser Glu Phe Asn Ser Tyr Ser
            215   220   225

Leu Thr Gly Tyr Val
            230

<210> 31
<211> 1792
<212> DNA
<213> Homo Sapien

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gatatgagct gtataattgt tgttattata tattaataaa taagaagttg 1700

cattaccctc aaaaaaaaaa aaaaaaaaaa aa 1732

(2) 100 82
(2) 110 451
(2) 120 PRT
(2) 120 Homo Sapien

(2) 100 82
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Met Val Pro Glu Val Arg Val Leu Ser Ser Leu Leu Gly Leu Ala
 1               5                   10                  15

Leu Leu Trp Phe Pro Leu Asp Ser His Ala Arg Ala Arg Pro Asp
                20                  25                  30

His Pro Cys Leu Phe His Gly Lys Arg Tyr Ser Pro Gly Glu Ser
                35                  40                  45

Trp His Pro Tyr Leu Glu Pro Gln Gly Leu Met Tyr Cys Leu Arg
                50                  55                  60

Cys Thr Cys Ser Glu Gly Ala His Val Ser Cys Tyr Arg Leu His
                65                  70                  75

Cys Pro Pro Val His Cys Pro Gln Pro Val Thr Glu Pro Gln Gln
                80                  85                  90

Cys Cys Pro Lys Cys Val Glu Pro His Thr Pro Ser Gly Leu Arg
                95                  100                 105

Ala Pro Pro Lys Ser Cys Gln His Asn Gly Thr Met Tyr Gln His
                110                 115                 120

Gly Glu Ile Phe Ser Ala His Glu Leu Phe Pro Ser Arg Leu Pro
                125                 130                 135

Asn Gln Cys Val Leu Cys Ser Cys Thr Glu Gly Gln Ile Tyr Cys
                140                 145                 150

Gly Leu Thr Thr Cys Pro Glu Pro Gly Cys Pro Ala Pro Leu Pro
                155                 160                 165

Leu Pro Asp Ser Cys Cys Gln Ala Cys Lys Asp Glu Ala Ser Glu
                170                 175                 180

Gln Ser Asp Glu Glu Asp Ser Val Gln Ser Leu His Gly Val Arg
                185                 190                 195

His Pro Gln Asp Pro Cys Ser Ser Asp Ala Gly Arg Lys Arg Gly
                200                 205                 210

Pro Gly Thr Pro Ala Pro Thr Gly Leu Ser Ala Pro Leu Ser Phe
                215                 220                 225

Ile Pro Arg His Phe Arg Pro Lys Gly Ala Gly Ser Thr Thr Val
                230                 235                 240
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Lys Ile Val Leu Lys Glu Lys His Lys Lys Ala Cys Val His Gly
          245               250               255

Gly Lys Thr Tyr Ser His Gly Glu Val Trp His Pro Ala Phe Arg
          260               265               270

Ala Phe Gly Pro Leu Pro Cys Ile Leu Cys Thr Cys Glu Asp Gly
          275               280               285

Arg Gln Asp Cys Gln Arg Val Thr Cys Pro Thr Glu Tyr Pro Cys
          290               295               300

Arg His Pro Glu Lys Val Ala Gly Lys Tyr Cys Lys Ile Cys Pro
          305               310               315

Glu Asp Lys Ala Asp Pro Gly His Ser Glu Ile Ser Ser Thr Arg
          320               325               330

Cys Pro Lys Ala Pro Gly Arg Val Leu Val His Thr Ser Val Ser
          335               340               345

Pro Ser Pro Asp Ser Leu Arg Arg Phe Ala Leu Glu His Glu Ala
          350               355               360

Ser Asp Leu Val Glu Ile Tyr Leu Trp Lys Leu Val Lys Asp Glu
          365               370               375

Glu Thr Glu Ala Thr Arg Gly Glu Val Pro Gly Pro Arg Pro His
          380               385               390

Ser Gln Asn Leu Pro Leu Asp Ser Asp Gln Glu Ser Gln Glu Ala
          395               400               405

Arg Leu Pro Glu Arg Gly Thr Ala Leu Pro Thr Ala Arg Trp Pro
          410               415               420

Pro Arg Arg Ser Leu Glu Arg Leu Pro Ser Pro Asp Pro Gly Ala
          425               430               435

Glu Gly His Gly Gln Ser Arg Gln Ser Asp Gln Asp Ile Thr Lys
          440               445               450

Thr
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gttctcctct tctctctaat ccatccgtca cctctcctgt catccgtttc 150

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<210> 84
<211> 500
<212> PRT
<213> Homo Sapien

<400> 84

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Met Ala Leu Met Leu Ser Leu Val Leu Ser Leu Leu Lys Leu Gly
1   5   10   15

Ser Gly Gln Trp Gln Val Phe Gly Pro Asn Lys Pro Val Gln Ala
        20   25   30

Ser Val Gly Glu Arg Ala Ala Phe Ser Cys Phe Leu Ser Pro Lys
        35   40   45

Thr Asn Ala Glu Ala Met Glu Val Arg Phe Phe Arg Gly Gln Phe
        50   55   60

Ser Ser Val Val His Leu Tyr Arg Asp Gly Lys Asp Gln Pro Phe
        65   70   75

Met Gln Met Pro Gln Tyr Gln Gly Arg Thr Lys Leu Val Lys Asp
                        80

Ser Ile Ala Glu Gly Arg Ile Ser Leu Arg Leu Glu Asn Ile Thr
                        100   105

Val Leu Asp Ala Gly Leu Tyr Gly Cys Arg Ile Ser Ser Gln Ser
        110   115   120

Tyr Tyr Gln Lys Ala Ile Trp Glu Leu Gln Val Ser Ala Leu Gly
        125   130   135

Ser Val Pro Leu Ile Ser Ile Thr Gly Tyr Val Asp Arg Asp Ile
        140   145   150

Gln Leu Leu Cys Gln Ser Ser Gly Trp Phe Pro Arg Pro Thr Ala
        155   160   165

Lys Trp Lys Gly Pro Gln Gly Gln Asp Leu Ser Thr Asp Ser Arg
        170   175   180

Thr Asn Arg Asp Met His Gly Leu Phe Asp Val Glu Ile Ser Leu
        185   190   195

Thr Val Gln Glu Asn Ala Gly Ser Ile Ser Cys Ser Met Arg His
        200   205   210

Ala His Leu Ser Arg Glu Val Glu Ser Arg Val Gln Ile Gly Asp
        215   220   225

Thr Phe Phe Glu Pro Ile Ser Trp His Leu Ala Thr Lys Val Leu
        230   235   240

106

Gly Ile Leu Cys Cys Gly Leu Phe Phe Gly Ile Val Gly Leu Lys
            245   250   255

Ile Phe Phe Ser Lys Phe Gln Trp Lys Ile Gln Ala Glu Leu Asp
            260   265   270

Trp Arg Arg Lys His Gly Gln Ala Glu Leu Arg Asp Ala Arg Lys
            275   280   285

His Ala Val Glu Val Thr Leu Asp Pro Gln Thr Ala His Pro Lys
            290   295   300

Leu Cys Val Ser Asp Leu Lys Thr Val Thr His Arg Lys Ala Pro
            305   315

Gln Glu Val Pro His Ser Glu Lys Arg Phe Thr Arg Lys Ser Val
            320   325   330

Val Ala Ser Gln Ser Phe Gln Ala Gly Lys His Tyr Trp Glu Val
            335   340   345

Asp Gly Gly His Asn Lys Arg Trp Arg Val Gly Val Cys Arg Asp
            350   355   360

Asp Val Asp Arg Arg Lys Glu Tyr Val Thr Leu Ser Pro Asp His
            365   370   375

Gly Tyr Trp Val Leu Arg Leu Asn Gly Glu His Leu Tyr Phe Thr
            380   385   390

Leu Asn Pro Arg Phe Ile Ser Val Phe Pro Arg Thr Pro Pro Thr
            395   400   405

Lys Ile Gly Val Phe Leu Asp Tyr Glu Lys Gly Thr Ile Ser Ile
            410   415   420

Phe Asn Ile Asn Asp Gln Ser Leu Ile Tyr Thr Leu Thr Cys Arg
            425   430   435

Phe Glu Gly Leu Leu Arg Pro Tyr Ile Leu Tyr Pro Ser Tyr Asn
            440   445   450

Glu Gln Asn Gly Thr Pro Ile Val Ile Lys Pro Val Thr Gln Glu
            455   460   465

Ser Glu Lys Glu Ala Ser Trp Gln Arg Ala Ser Ala Ile Pro Glu
            470   475   480

Thr Ser Asn Ser Glu Ser Ser Ser Gln Ala Thr Thr Pro Phe Leu
            485   490   495

Pro Arg Gly Glu Met
            500

<210> 85
<211> 1665
<212> DNA
<213> Homo Sapien

<400> 85
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gtccatgtgc cctgctcctt ctcctacccc tcgcatggct ggatttaccc 200

tggcccagta gttcatggct actggttccg ggaaggggcc aatacagacc 250

aggatgctcc agtggccaca aacaacccag ctcgggcagt gtgggaggag 300

actcgggacc gattccacct ccttggggac ccacatacca agaattgcac 350

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gtatgcagaa aggaagtata aaatggaatt ataaacatca ccggctctct 450

gtgaatgtca catccttgac ccacaggctc aacatcctca tcccaggcac 500

cctggagttc ggctgcccc agaatctgac ctgctctgtg ccctgggcct 550

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gcaacagctca gaacccctc ggctctcagc tggttctacct gaacctctcc 1050

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tgaggccaca ccctgctct tcctgtcctt ctgcgtcatc ttcgttgtag 1150

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agcttccaga tggtgaagcc ttgggactcg cgggacaag aggccactga 1400

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accctgattg aggatcaca gccctccag gcaagggaga agtcagaggc 1500

tgattttgt actttaaca gccctcaaca tgatgagcta tgataacact 1550

atgaattatg tgcagagtga aagcacaca agctttaaag tcaaagtatt 1600

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<210> 56
<211> 463
<212> PRT
<213> Homo Sapien

<400> 56

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Glu Gly Gln Thr Ser Lys Leu Leu Thr Met Gln Ser Ser Val Thr
            20                  25                  30

Val Gln Glu Gly Leu Cys Val His Val Pro Cys Ser Phe Ser Tyr
            35                  40                  45

Pro Ser His Gly Trp Ile Tyr Pro Gly Pro Val Val His Gly Tyr
            50                  55                  60

Trp Phe Arg Glu Gly Ala Asn Thr Asp Gln Asp Ala Pro Val Ala
            65                  70                  75

Thr Asn Asn Pro Ala Arg Ala Val Trp Glu Glu Thr Arg Asp Arg
            80                  85                  90

Phe His Leu Leu Gly Asp Pro His Thr Lys Asn Cys Thr Leu Ser
            95                 100                 105

Ile Arg Asp Ala Arg Arg Ser Asp Ala Gly Arg Tyr Phe Phe Arg
           110                 115                 120

Met Glu Lys Gly Ser Ile Lys Trp Asn Tyr Lys His His Arg Leu
           125                 130                 135

Ser Val Asn Val Thr Ala Leu Thr His Arg Pro Asn Ile Leu Ile
           140                 145                 150

Pro Gly Thr Leu Glu Ser Gly Cys Pro Gln Asn Leu Thr Cys Ser
           155                 160                 165

Val Pro Trp Ala Cys Glu Gln Gly Thr Pro Pro Met Ile Ser Trp
           170                 175                 180

Ile Gly Thr Ser Val Ser Pro Leu Asp Pro Ser Thr Thr Arg Ser
           185                 190                 195

Ser Val Leu Thr Leu Ile Pro Gln Pro Gln Asp His Gly Thr Ser
           200                 205                 210

Leu Thr Cys Gln Val Thr Phe Pro Gly Ala Ser Val Thr Thr Asn
           215                 220                 225

Lys Thr Val His Leu Asn Val Ser Tyr Pro Pro Gln Asn Leu Thr
           230                 235                 240

Met Thr Val Phe Gln Gly Asp Gly Thr Val Ser Thr Val Leu Gly
           245                 250                 255

Asn Gly Ser Ser Leu Ser Leu Pro Glu Gly Gln Ser Leu Arg Leu
           260                 265                 270

Val Cys Ala Val Asp Ala Val Asp Ser Asn Pro Pro Ala Arg Leu
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109

Ser Leu Ser Trp Arg Gly Leu Thr Leu Cys Pro Ser Gln Pro Ser
              290   295   300

Asn Pro Gly Val Leu Glu Leu Pro Trp Val His Leu Arg Asp Ala
              305   310   315

Ala Glu Phe Thr Cys Arg Ala Gln Asn Pro Leu Gly Ser Gln Gln
              320   325   330

Val Tyr Leu Asn Val Ser Leu Gln Ser Lys Ala Thr Ser Gly Val
              335   340   345

Thr Gln Gly Val Val Gly Gly Ala Gly Ala Thr Ala Leu Val Phe
              350   355   360

Leu Ser Phe Cys Val Ile Phe Val Val Val Arg Ser Cys Arg Lys
              365   370   375

Lys Ser Ala Arg Pro Ala Ala Gly Val Gly Asp Thr Gly Ile Glu
              380   385   390

Asp Ala Asn Ala Val Arg Gly Ser Ala Ser Gln Gly Pro Leu Thr
              395   400   405

Glu Pro Trp Ala Glu Asp Ser Pro Pro Asn Gln Pro Pro Pro Ala
              410   415   420

Ser Ala Arg Ser Ser Val Gly Glu Gly Glu Leu Gln Tyr Ala Ser
              425   430   435

Leu Ser Phe Gln Met Val Lys Pro Trp Asp Ser Arg Gly Gln Leu
              440   445   450

Ala Thr Asp Thr Leu Tyr Ser Glu Ile Lys Ile His Arg
              455   460

<210> 87
<211> 1176
<212> DNA
<213> Homo Sapien

<400> 87
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caatgaacca actcaccttc ctgctgtttc tcatagcgac caccagagga 150
tggagtacag atgagactaa tacttacttc aaggaatgga cctgttcttc 200
gtctccatct ctgctcagaa gctgcaagga aatcaagac gaatgtccta 250
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cagacettct gtgacatgac ctctgggggt ggcgactgga ccctggtggc 350
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ggtccagtca gcagggcagt aaagcagact tacctgaggg ggacggcaac 450
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ctacaagaac cctggctact acgacatcca ggccaaggac ctgggcatct 550

ggcagtgcc caataagtcc cccatgcagc actggagaaa cagctccctg 600

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cagaaaatag catcttatta ctcaccctat ggccagcggg aattcactgc 800

gggatttgtt cagttcaggg tatttaataa cgagaagca gccaacgcct 850

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tgtgggaggg aaccccagacc tctcctccca accatgagat cccaaggatg 1100

gagaacaact tacccagtag ctagaatgtt aatggcagaa gagaaaacaa 1150

taaatcatat tgactcaaga aaaaaa 1176

<210> 83
<211> 313
<212> PRT
<213> Homo Sapien

<400> 83
Met Asn Gln Leu Ser Phe Leu Leu Phe Leu Ile Ala Thr Thr Arg
1   5   10   15

Gly Trp Ser Thr Asp Glu Ala Asn Thr Tyr Phe Lys Glu Trp Thr
                20   25   30

Lys Ser Ser Ser Pro Ser Leu Pro Arg Ser Cys Lys Glu Ile Lys
            35   40   45

Asp Glu Cys Pro Ser Ala Phe Asp Gly Leu Tyr Phe Leu Arg Thr
            50   55   60

Glu Asn Gly Val Ile Tyr Gln Thr Phe Cys Asp Met Thr Ser Gly
            65   70   75

Gly Gly Gly Trp Thr Leu Val Ala Ser Val His Glu Asn Asp Met
            80   85   90

Arg Gly Lys Cys Thr Val Gly Asp Arg Trp Ser Ser Gln Gln Gly
            95   100   105

Ser Lys Ala Asp Tyr Pro Glu Gly Asp Gly Asn Trp Ala Asn Tyr
            110   115   120

Asn Thr Phe Gly Ser Ala Glu Ala Ala Thr Ser Asp Asp Tyr Lys
            125   130   135

Asn Pro Gly Tyr Tyr Asp Ile Gln Ala Lys Asp Leu Gly Ile Trp

His Val Pro Asn Lys Ser Pro Met Gln His Trp Arg Asn Ser Ser
            155   160   165

Leu Leu Arg Tyr Arg Thr Asp Thr Gly Phe Leu Gln Thr Leu Gly
            170   175   180

His Asn Leu Phe Gly Ile Tyr Gln Lys Tyr Pro Val Lys Tyr Gly
            185   190   195

Glu Gly Lys Cys Trp Thr Asp Asn Gly Pro Val Ile Pro Val Val
            200   205   210

Tyr Asp Phe Gly Asp Ala Gln Lys Thr Ala Ser Tyr Tyr Ser Pro
            215   220   225

Tyr Gly Gln Arg Glu Phe Thr Ala Gly Phe Val Gln Phe Arg Val
            230   235   240

Phe Asn Asn Glu Arg Ala Ala Asn Ala Leu Cys Ala Gly Met Arg
            245   250   255

Val Thr Gly Cys Asn Thr Glu His His Cys Ile Gly Gly Gly Gly
            260   265   270

Tyr Phe Pro Glu Ala Ser Pro Gln Gln Cys Gly Asp Phe Ser Gly
            275   280   285

Phe Asp Trp Ser Gly Tyr Gly Thr His Val Gly Tyr Ser Ser Ser
            290   295   300

Arg Glu Ile Thr Leu Ala Ala Val Leu Leu Phe Tyr Arg
            305   310

<210> 89
<211> 759
<212> DNA
<213> Homo Sapien

<400> 89
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tccagccttca gagaccgccg cccttgtccc cgagggccat gggcccgggtc 100

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cgtcatcacc ttattctggt cccgggacag caacatacag gcctgcctgc 200

ctctcaagtt caccccggag gagtatgaca agcaggacat tcagctggtg 250

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cctctcagga gtctccatgt tcaacagcac ccagatcctc atctccattg 350

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ggcaagggcc gcttcgtatt cctggaagaa ggaaggcata ggcttcggtt 600

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aaaaaaaaa 759

<210> 90
<211> 140
<212> PRT
<213> Homo Sapien

<400> 90
Met Gly Arg Val Ser Gly Leu Val Pro Ser Arg Phe Leu Thr Leu
1   5   10   15

Leu Ala His Leu Val Val Val Ile Thr Leu Phe Trp Ser Arg Asp
            20   25   30

Ser Asn Ile Gln Ala Cys Leu Pro Leu Thr Phe Thr Pro Glu Glu
            35   40   45

Tyr Asp Lys Gln Asp Ile Gln Leu Val Ala Ala Leu Ser Val Thr
            50   55   60

Leu Gly Leu Phe Ala Val Glu Leu Ala Gly Phe Leu Ser Gly Val
            65   70   75

Ser Met Phe Asn Ser Thr Gln Ser Leu Ile Ser Ile Gly Ala His
            80   85   90

Tyr Ser Ala Ser Val Ala Leu Ser Phe Phe Ile Phe Glu Arg Trp
            95   100   105

Glu Cys Thr Thr Tyr Trp Tyr Ile Phe Val Phe Cys Ser Ala Leu
            110   115   120

Pro Ala Val Thr Glu Met Ala Leu Phe Val Thr Val Phe Gly Leu
            125   130   135

Lys Lys Lys Pro Phe
            140

<210> 91
<211> 1571
<212> DNA
<213> Homo Sapien

<400> 91
ctgggacccc gaaaagagaa ggggagagcg aggggacgag agcggaggag 50

gaagatgcaa ctaactcgct gctgcttcgt attcctagtg caggtagcc 100

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cctgaggctg atgacaaga gggccagccc caggccaggg tgcctcggaa 200

gggggccac atctcacgta agtcccgccc catgaccaat tccactctcc 250

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<210> 9?
<211> 252
<212> PRT
<213> Homo Sapien

<400> 9

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Leu Tyr Leu Val Ile Cys Gly Gln Asp Asp Gly Pro Pro Gly Ser
                20                  25                  30

Glu Asp Pro Glu Arg Asp Asp His Glu Gly Gln Pro Arg Pro Arg
                35                  40                  45

Val Pro Arg Lys Arg Gly His Ile Ser Pro Lys Ser Arg Pro Met
                50                  55                  60

Ala Asn Ser Thr Leu Leu Gly Leu Leu Ala Pro Pro Gly Glu Ala
                65                  70                  75

Trp Gly Ile Leu Gly Gln Pro Pro Asn Arg Pro Asn His Ser Pro
                80                  85                  90

Pro Pro Ser Ala Lys Val Lys Lys Ile Phe Gly Trp Gly Asp Phe
                95                  100                 105

Tyr Ser Asn Ile Lys Thr Val Ala Leu Asn Leu Leu Val Thr Gly
                110                 115                 12

Lys Ile Val Asp His Gly Asn Gly Thr Phe Ser Val His Phe Gln
                1                   1                   1

His Asn Ala Thr Gly Gln Gly Asn Ile Ser Ile Ser Leu Val Pro
                1                   145                 1

Pro Ser Lys Ala Val Glu Phe His Gln Gln Gln Gln Ile Phe Leu
                1                   160                 1

Glu Ala Lys Ala Ser Lys Ile Phe Asn Cys Arg Met Glu Trp Glu
                170                 175                 1

Lys Val Glu Arg Gly Arg Arg Thr Ser Leu Cys Thr His Asp Pro
                1                   190                 1

Ala Lys Ile Cys Ser Arg Asp His Ala Gln Ser Ser Ala Thr Trp
                200                 2 5                 210

Ser Cys Ser Gln Pro Phe Lys Val Val Cys Val Tyr Ile Ala Phe
                215                 2 0                 2 5

Tyr Ser Thr Asp Tyr Arg Leu Val Gln Lys Val Cys Pro Asp Tyr
                230                 2 5                 240

Asn Tyr His Ser Asp Thr Pro Tyr Tyr Pro Ser Gly
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<211> 502
<212> DNA
<213> Homo Sapien

<400> 93

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ggatcaacac agaaatatct gctgatcttt ggagcgtttg tctctgtcta 250

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cggaggcagc tgccgaagcc tgaaactctg cctgctctgc caagacaaga 750

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ta 902

<210> 94
<211> 157
<212> PRT
<213> Homo Sapien

<400> 94
Met Thr Ala Ala Val Phe Phe Gly Cys Ala Phe Ile Ala Phe Gly
1   5   10   15

Pro Ala Leu Ala Leu Tyr Val Phe Thr Ile Ala Ile Glu Pro Leu
                20   25   30

Arg Ile Ile Phe Leu Ile Ala Gly Ala Phe Phe Trp Leu Val Ser
                35   40   45

Leu Leu Ile Ser Ser Leu Val Trp Phe Met Ala Arg Val Ile Ile
                50   55   60

Asp Asn Lys Arg Gly Pro Thr Gln Leu Thr Leu Leu Ile Phe Gly
                65   75

Ala Phe Val Ser Val Tyr Ile Gln Glu Met Phe Arg Phe Ala Tyr
                80   85   90

116

Tyr Lys Leu Leu Lys Lys Ala Ser Glu Gly Leu Lys Ser Ile Asn
        95   100   105

Pro Gly Glu Thr Ala Pro Ser Met Arg Leu Leu Ala Tyr Val Ser
        110   115   120

Gly Leu Gly Phe Gly Ile Met Ser Gly Val Phe Ser Phe Val Asn
        125   130   135

Thr Leu Ser Asp Ser Leu Gly Pro Gly Thr Val Gly Ile His Gly
        140   145   150

Asp Ser Pro Gln Phe Phe Leu Tyr Ser Ala Phe Met Thr Leu Val
        155   160   165

Ile Ile Leu Leu His Val Phe Trp Gly Ile Val Phe Phe Asp Gly
        170   175   180

Cys Glu Lys Lys Lys Trp Gly Ile Leu Leu Ile Val Leu Leu Thr
        185   190   195

His Leu Leu Val Ser Ala Gln Thr Phe Ile Ser Ser Tyr Tyr Gly
        200   205   210

Ile Asn Leu Ala Ser Ala Phe Ile Ile Leu Val Leu Met Gly Thr
        215   220   225

Trp Ala Phe Leu Ala Ala Gly Gly Ser Cys Arg Ser Leu Lys Leu
        230   235   240

Cys Leu Leu Cys Gln Asp Lys Asn Phe Leu Leu Tyr Asn Gln Arg
        245   250   255

Ser Arg

<210> 95
<211> 1073
<212> DNA
<213> Homo Sapien

<400> 95
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aacctgcttt gggacttcct cccacaaaac tggctccgga tgaggaaca 200

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cacacaactt ggagacccgg tgaatatact catcttgtag gaattgctat 450

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ccaccagtc aggcagggc taatccagat gtccaggatg gaagccttcc 550

atcaggagga gcaggtgtaa atcctgccac ccagggaacc ccagcaggcc 600

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gattgagaca cattggatag tcttagaaga aattaattct taatttacct 850

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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1050

aaaaaaaaaa aaaaaaaaaa aaa 1073

(210) 96
(211) 269
(212) PRT
(213) Homo Sapien

(400) 96
Met Arg Ser Thr Ile Leu Leu Phe Cys Leu Leu Gly Ser Thr Arg
1   5   10   15

Ser Leu Pro Gln Leu Lys Pro Ala Leu Gly Leu Pro Pro Thr Lys
            20   25   30

Leu Ala Pro Asp Gln Gly Thr Leu Pro Asn Gln Gln Gln Ser Asn
            35   40   45

Gln Val Phe Pro Ser Leu Ser Leu Ile Pro Leu Thr Gln Met Leu
            50   55   60

Thr Leu Gly Pro Asp Leu His Leu Leu Asn Pro Ala Ala Gly Met
            65   70   75

Thr Pro Gly Thr Gln Thr His Pro Leu Thr Leu Gly Gly Leu Asn
            80   85   90

Val Gln Gln Gln Leu His Pro His Val Leu Pro Ile Phe Val Thr
            95   100   105

Gln Leu Gly Ala Gln Gly Thr Ile Leu Ser Ser Glu Glu Leu Pro
            110   115   120

Gln Ile Phe Thr Ser Leu Ile Ile His Ser Leu Phe Pro Gly Gly
            125   130   135

Ile Leu Pro Thr Ser Gln Ala Gly Ala Asn Pro Asp Val Gln Asp
            140   145   150

Gly Ser Leu Pro Ala Gly Gly Ala Gly Val Asn Pro Ala Thr Gln
            155   160   165

118

Gly Thr Pro Ala Gly Arg Leu Pro Thr Pro Ser Gly Thr Asp Asn
        170   175   180

Asp Phe Ala Val Thr Thr Pro Ala Gly Ile Gln Arg Ser Thr His
        185   190   195

Ala Ile Glu Glu Ala Thr Thr Glu Ser Ala Asn Gly Ile Gln
        200   205

<210> 17
<211> 1348
<212> DNA
<213> Homo Sapien

<400> 17
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tttggggctg gagggcctgt cctgaccatg gtcctgcct ggctgtggct 150

gcctgtgtc tccgtccccc aggctctcc caagcccag cctgcagagc 200

tgtctgtgga agttccagaa aactatggtg gaaatttccc tttatacctg 250

accaagttgc cgctgcccg tgagggggct gaaggccaga tcgtgctgtc 300

aggggactca ggcaaggcaa ctgaggcccc atttgctatg gatccagatt 350

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<210> 98
<211> 807
<212> PRT
<213> Homo Sapien

<400> 98
Met Val Pro Ala Trp Leu Trp Leu Leu Cys Val Ser Val Pro Gln
1   5   10   15

Ala Leu Pro Lys Ala Gln Pro Ala Glu Leu Ser Val Glu Val Pro
            20   25   30

Glu Asn Tyr Gly Gly Asn Phe Pro Leu Tyr Leu Thr Lys Leu Pro
            35   40   45

Leu Pro Arg Glu Gly Ala Glu Gly Gln Ile Val Leu Ser Gly Asp
            50   55   60

Ser Gly Lys Ala Thr Glu Gly Pro Phe Ala Met Asp Pro Asp Ser
            65   70   75

Gly Phe Leu Leu Val Thr Arg Ala Leu Asp Arg Glu Glu Gln Ala
            80   85   90

Glu Tyr Gln Leu Gln Val Thr Leu Glu Met Gln Asp Gly His Val
            95   100   105

Leu Trp Gly Pro Gln Pro Val Leu Val His Val Lys Asp Glu Asn
            110   115   120

Asp Gln Val Pro His Phe Ser Gln Ala Ile Tyr Arg Ala Arg Leu
            125   130   135

Ser Arg Gly Thr Arg Pro Gly Ile Pro Ile Leu Phe Leu Glu Ala
            140   145   150

Ser Asp Arg Asp Glu Pro Gly Thr Ala Asn Ser Asp Leu Arg Phe
            155   160   165

His Ile Leu Ser Gln Ala Pro Ala Gln Trp Ser Pro Asp Met Phe
            170   175   180

Gln Leu Glu Pro Arg Leu Gly Ala Leu Ala Leu Ser Pro Lys Gly
            185   190   195

Ser Thr Ser Leu Asp His Ala Leu Glu Arg Thr Tyr Gln Leu Leu
            200   205   210

Val Gln Val Lys Asp Met Gly Asp Gln Ala Ser Gly His Gln Ala
            215   220   225

Thr Ala Thr Val Glu Val Ser Ile Ile Glu Ser Thr Trp Val Ser
            230   235   240

Leu Glu Pro Ile His Leu Ala Glu Asn Leu Lys Val Leu Tyr Pro
            245   250   255

His His Met Ala Gln Val His Trp Ser Gly Gly Asp Val His Tyr
            260   265   270

121

His Leu Glu Ser His Pro Pro Gly Pro Phe Glu Val Asn Ala Glu
         275   280   285

Gly Asn Leu Tyr Val Thr Arg Glu Leu Asp Arg Glu Ala Gln Ala
         290   295   300

Glu Tyr Leu Leu Gln Val Arg Ala Gln Asn Ser His Gly Glu Asp
         305   310   315

Tyr Ala Ala Pro Leu Glu Leu His Val Leu Val Met Asp Glu Asn
         320   325   330

Asp Asn Val Pro Ile Cys Pro Pro Arg Asp Pro Thr Val Ser Ile
         335   340   345

Pro Glu Leu Ser Pro Pro Gly Thr Glu Val Thr Arg Leu Ser Ala
         350   355   360

Glu Asp Ala Asp Ala Pro Gly Ser Pro Asn Ser His Val Val Tyr
         365   370   375

Gln Leu Leu Ser Pro Glu Pro Glu Asp Gly Val Glu Gly Arg Ala
         380   385   390

Phe Gln Val Asp Pro Thr Ser Gly Ser Val Thr Leu Gly Val Leu
         395   400   405

Pro Leu Arg Ala Gly Gln Asn Ile Leu Leu Leu Val Leu Ala Met
         410   415   420

Asp Leu Ala Gly Ala Glu Gly Gly Phe Ser Ser Thr Cys Glu Val
         425   430   435

Glu Val Ala Val Thr Asp Ile Asn Asp His Ala Pro Glu Phe Ile
         440   445   450

Thr Ser Gln Ile Gly Pro Ile Ser Leu Pro Glu Asp Val Glu Pro
         455   460   465

Gly Thr Leu Val Ala Met Leu Thr Ala Leu Asp Ala Asp Leu Glu
         470   475   480

Pro Ala Phe Arg Leu Met Asp Phe Ala Ile Glu Arg Gly Asp Thr
         485   490   495

Gln Gly Thr Phe Gly Leu Asp Trp Glu Pro Asp Ser Gly His Val
         500   505   510

Arg Leu Arg Leu Cys Lys Asn Leu Ser Tyr Glu Ala Ala Pro Ser
         515   520   525

His Glu Val Val Val Val Val Gln Ser Val Ala Lys Leu Val Gly
         530   535   540

Pro Gly Pro Gly Pro Gly Ala Thr Ala Thr Val Thr Val Leu Val
         545   550   555

Glu Arg Val Met Pro Pro Pro Lys Leu Asp Gln Glu Ser Tyr Gln
         560   565   570

Ala Ser Val Pro Ile Ser Ala Pro Ala Gly Ser Phe Leu Leu Tyr
         575   580   585

Ile Gln Pro Ser Asp Pro Ile Ser Arg Thr Leu Arg Phe Ser Leu
            590   595   600

Val Asn Asp Ser Glu Gly Trp Leu Cys Ile Glu Lys Phe Ser Gly
            605   610   615

Glu Val His Thr Ala Gln Ser Leu Gln Gly Ala Gln Pro Gly Asp
            620   625   620

Thr Tyr Thr Val Leu Val Glu Ala Gln Asp Thr Ala Leu Thr Leu
            635   640   645

Ala Pro Val Pro Ser Gln Tyr Leu Cys Thr Pro Arg Gln Asp His
            650   655   660

Gly Leu Ile Val Ser Gly Pro Ser Lys Asp Pro Asp Leu Ala Ser
            665   670   675

Gly His Gly Pro Tyr Ser Phe Thr Leu Gly Pro Asn Pro Thr Val
            680   685   690

Gln Arg Asp Trp Arg Leu Gln Thr Leu Asn Gly Ser His Ala Tyr
            695   700

Leu Thr Leu Ala Leu His Trp Val Glu Pro Arg Glu His Ile Ile
            710   715   720

Pro Val Val Val Ser His Asn Ala Gln Met Trp Gln Leu Leu Val
            725   730   735

Arg Val Ile Val Cys Arg Cys Asn Val Glu Gly Gln Cys Met Arg
            740   745

Lys Val Gly Arg Met Lys Gly Met Pro Thr Lys Leu Ser Ala Val
            755   760   765

Gly Ile Leu Val Gly Thr Leu Val Ala Leu Gly Ile Phe Leu Ile
            770   775   780

Leu Ile Phe Thr His Trp Thr Met Ser Arg Lys Lys Asp Pro Asp
            785   790   795

Gln Pro Ala Asp Ser Val Pro Leu Lys Ala Thr Val
            800   305

<210> 99
<211> 2436
<212> DNA
<213> Homo Sapien

<400> 99
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 agctgccac ggctgagtcc aagattcttc ccaggaacac aaacgtagga 100

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 ctttgttaag aatcctctgt tctttgccct ctaaagtctt ggtacatcta 200

 tcgctttggc ttctttgttt ccggtacaa adagcatagat ttatgttttc 250

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tctccagtgg agccagcaca gcaccaact ctgggtccag tgtgacctcc 400

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ttgagaaacac ctttaannnn gctgtctann accctcatgg cctcaancat 1900

ggccttggtc caggccctgg agggaatcat ggagcccccc acaggcccag 1950

gtggagtcct aactggttct ggaggagacc agtatcatcg atagccatgg 2000

agatgagcgg gaggaacagc gggccctgag cagccccgga agcaagtgcc 2050

gcattcttca ggaaggaaga gactgggca cccaagacct ggtttccttt 2100

cattcatccc aggagacccc tccagcttt gtttgagatc ctgaaaatct 2150

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aatactatat tgctcattta gctaagaaat aaatacatct catctaacac 2250

acacgacaaa gagaagctgt gcttgccccg gggtgggtat ctagctctga 2300

gatgaactca gttataggag aaaacctcca tgctggactc catctggcat 2350

tcaaaatctc cacagtaaaa tccaaagacc tgaaaaaaaa aaaaaaaaaa 2400

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa 2436

<210> 100
<211> 596
<212> PRT
<213> Homo Sapien

<400> 100
Met Lys Met Gln Lys Gly Asn Val Leu Leu Met Phe Gly Leu Leu
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Leu His Leu Glu Ala Ala Thr Asn Ser Asn Glu Thr Ser Thr Ser
            20   25   30

Ala Asn Thr Gly Ser Ser Val Ile Ser Ser Gly Ala Ser Thr Ala
            35   40   45

Thr Asn Ser Gly Ser Ser Val Thr Ser Ser Gly Val Ser Thr Ala
            50   55   60

Thr Ile Ser Gly Ser Ser Val Thr Ser Asn Gly Val Ser Ile Val
            65   70   75

Thr Asn Ser Glu Phe His Thr Thr Ser Ser Gly Ile Ser Thr Ala
            80   85   90

Thr Asn Ser Glu Phe Ser Thr Ala Ser Ser Gly Ile Ser Ile Ala
            95   100   105

Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala
            110   115   120

Thr Asn Ser Glu Ser Ser Thr Pro Ser Ser Gly Ala Ser Thr Val
            125   130   135

Thr Asn Ser Gly Ser Ser Val Thr Ser Ser Gly Ala Ser Thr Ala
            140   145   150

Thr Asn Ser Glu Ser Ser Thr Val Ser Ser Ala Ala Ser Thr Ala
            155   160   165

Thr Asn Ser Glu Ser Ser Thr Leu Ser Ser Gly Ala Ser Thr Ala

125

Thr Asn Ser Asp Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala
185   1 0   1 5

Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala
200   2 5   2 0

Thr Asn Ser Glu Ser Ser Thr Val Ser Ser Arg Ala Ser Thr Ala
215   2 0   2 5

Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala
2 0   2 5   240

Thr Asn Ser Glu Ser Arg Thr Thr Ser Asn Gly Ala Gly Thr Ala
245   2 0   5

Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala
2 0   65   2 0

Thr Asn Ser Asp Ser Ser Thr Val Ser Ser Gly Ala Ser Thr Ala
       0   8

Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala
2 0   5   0

Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala
       5   10   5

Thr Asn Ser Asp Ser Ser Thr Thr Ser Ser Gly Ala Gly Thr Ala
20   5   3

Thr Asn Ser Glu Ser Ser Thr Val Ser Ser Gly Ile Ser Thr Val
35   4   45

Thr Asn Ser Glu Ser Ser Thr Pro Ser Ser Gly Ala Asn Thr Ala
5   5   60

Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Asn Thr Ala
65   0   75

Thr Asn Ser Glu Ser Ser Thr Val Ser Ser Gly Ala Ser Thr Ala
0   85   0

Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Val Ser Thr Ala
5   00   05

Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala
410   15   420

Thr Asn Ser Asp Ser Ser Thr Thr Ser Ser Glu Ala Ser Thr Ala
4 5   0   4 5

Thr Asn Ser Glu Ser Ser Thr Val Ser Ser Gly Ile Ser Thr Val
40   5   45

Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Asn Thr Ala
55   0   4 5

Thr Asn Ser Gly Ser Ser Val Thr Ser Ser Gly Ser Gly Thr Ala
70   75   460

Ala Leu Thr Gly Met His Thr Thr Ser His Ser Ala Ser Thr Ala

```
Val Ser Glu Ala Lys Pro Gly Gly Ser Leu Val Pro Trp Glu Ile
                 500             505             510
```

```
Phe Leu Ile Thr Leu Val Ser Val Val Ala Ala Val Gly Leu Phe
                 515             520             525
```

```
Ala Gly Leu Phe Phe Cys Val Arg Asn Ser Leu Ser Leu Arg Asn
                 530             535             540
```

```
Thr Phe Asn Thr Ala Val Tyr His Pro His Gly Leu Asn His Gly
                 545             550             555
```

```
Leu Gly Pro Gly Pro Gly Gly Asn His Gly Ala Pro His Arg Pro
                 560             565             570
```

```
Arg Trp Ser Pro Asn Trp Phe Trp Arg Arg Pro Val Ser Ser Ile
                 575             580             585
```

```
Ala Met Glu Met Ser Gly Arg Asn Ser Gly Pro
                 590             595
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(210) 101
(211) 1728
(212) DNA
(213) Homo Sapien

(400) 101

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<400> 103
<211> 414
<212> PRT
<213> Homo Sapien

<400> 103
Met His Ser Arg Gly Arg Glu Ile Val Val Leu Leu Asn Pro Trp
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Ser Ile Asn Glu Ala Val Ser Ser Tyr Cys Thr Tyr Phe Ile Lys
                20   25   30

Gln Asp Ser Lys Ser Phe Gly Ile Met Val Ser Trp Lys Gly Ile
                35   40   45

Tyr Phe Ile Leu Thr Leu Phe Trp Gly Ser Phe Phe Gly Ser Ile
                50   55   60

Phe Met Leu Ser Pro Phe Leu Pro Leu Met Phe Val Asn Pro Ser
                65   70   75

Trp Tyr Arg Trp Ile Asn Asn Arg Leu Val Ala Thr Trp Leu Thr
                80   85   90

Leu Pro Val Ala Leu Leu Glu Thr Met Phe Gly Val Lys Val Ile
                95   100   105

128

Ile Thr Gly Asp Ala Phe Val Pro Gly Glu Arg Ser Val Ile Ile
                110   115   120

Met Asn His Arg Thr Arg Met Asp Trp Met Phe Leu Trp Asn Cys
                125   130   135

Leu Met Arg Tyr Ser Tyr Leu Arg Leu Glu Lys Ile Cys Leu Lys
                140   145   150

Ala Ser Leu Lys Gly Val Pro Gly Phe Gly Trp Ala Met Gln Ala
                155   160   165

Ala Ala Tyr Ile Phe Ile His Arg Lys Trp Lys Asp Asp Lys Ser
                170   175   180

His Phe Glu Asp Met Ile Asp Tyr Phe Cys Asp Ile His Glu Pro
                185   190   195

Leu Gln Leu Leu Ile Phe Pro Glu Gly Thr Asp Leu Thr Glu Asn
                200   205   210

Ser Lys Ser Arg Ser Asn Ala Phe Ala Glu Lys Asn Gly Leu Glu
                215   220   225

Lys Tyr Glu Tyr Val Leu His Pro Arg Thr Thr Gly Phe Thr Phe
                230   235   240

Val Val Asp Arg Leu Arg Glu Gly Lys Asn Leu Asp Ala Val His
                245   250   255

Asp Ile Thr Val Ala Tyr Pro His Asn Ile Pro Gln Ser Glu Lys
                260   265   270

His Leu Leu Gln Gly Asp Phe Pro Arg Glu Ile His Phe His Val
                275   280   285

His Arg Tyr Pro Ile Asp Thr Leu Pro Thr Ser Lys Glu Asp Leu
                290   295   300

Gln Leu Trp Cys His Lys Arg Trp Glu Leu Lys Glu Glu Arg Leu
                305   310   315

Arg Ser Phe Tyr Gln Gly Glu Lys Asn Phe Tyr Phe Thr Gly Gln
                320   325   330

Ser Val Ile Pro Pro Cys Lys Ser Glu Leu Arg Val Leu Val Val
                335   340   345

Lys Leu Leu Ser Ile Leu Tyr Trp Thr Leu Phe Ser Pro Ala Met
                350   355   360

Cys Leu Leu Ile Tyr Leu Tyr Ser Leu Val Lys Trp Tyr Phe Ile
                365   370   375

Ile Thr Ile Val Ile Phe Val Leu Gln Leu Arg Ile Phe Gly Gly
                380   385   390

Leu Glu Ile Ile Glu Leu Ala Cys Tyr Arg Leu Leu His Lys Gln
                395   400   405

Pro His Leu Asn Ser Lys Lys Asn Glu
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<210> 103
<211> 2103
<212> DNA
<213> Homo Sapien

<400> 103

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tgacggcaca gtgtttgcta atgatgtgtt tttatattat acatttccc 2000

tccccaaat ctgtttgctt attccacatt aatttacttt tctctatacc 2050

aaatacta tggaatagtt attgaacacc tgctttgtga ggctcaaaga 2100

atatagagga ggtaggattt ttcactgatt ctataagccc agcattacct 2150

gatcccaaa ccaggcaaag aaacagaag aagaggtagg aaactacag 2200

gtcatatcc ctcattaaca cagacacaaa aattctaaat aaaattttaa 2250

aaaattaac taaacaatat atttaaagat gatatataac tactcagtgt 2300

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aaa 2413

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<211> 466
<212> PRT
<213> Homo Sapien

<400> 104
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Ser Gly Gln Trp Gln Val Thr Gly Pro Gly Lys Phe Val Glu Ala
            20   25   30

Ile Val Gly Glu Asp Ala Val Phe Ser Cys Ser Leu Phe Pro Glu
        35   40   45

Thr Ser Ala Glu Ala Met Glu Val Arg Phe Phe Arg Asn Gln Phe
        50   55   60

His Ala Val Val His Leu Tyr Arg Asp Gly Glu Asp Trp Glu Ser
    65   70   75

Lys Gln Met Pro Gln Tyr Arg Gly Arg Thr Glu Phe Val Lys Asp

Ser Ile Ala Gly Gly Arg Val Ser Leu Arg Leu Lys Asn Ile Thr
                    95   100   105

Pro Ser Asp Ile Gly Leu Tyr Gly Cys Trp Phe Ser Ser Gln Ile
                   110   115   1

Tyr Asp Glu Glu Ala Thr Trp Glu Leu Arg Val Ala Ala Leu Gly
                   1   120   125

Ser Leu Pro Leu Ile Ser Ile Val Gly Tyr Val Asp Gly Gly Ile
                   1   145   150

Gln Leu Leu Cys Leu Ser Ser Gly Trp Phe Pro Gln Pro Thr Ala
                   1   160   165

Lys Trp Lys Gly Pro Gln Gly Gln Asp Leu Ser Ser Asp Ser Arg
                   1   175   180

Ala Asn Ala Asp Gly Tyr Ser Leu Tyr Asp Val Glu Ile Ser Leu
                   1   1   1

Ile Val Gln Glu Asn Ala Gly Ser Ile Leu Cys Ser Ile His Leu
                   2   205   21

Ala Glu Gln Ser His Glu Val Glu Ser Lys Val Leu Ile Gly Gln
                   215   2   2

Thr Phe Phe Gln Pro Ser Pro Trp Arg Leu Ala Ser Ile Leu Leu
                   2   2   24

Gly Leu Leu Cys Gly Ala Leu Cys Gly Val Val Met Gly Met Ile
                   2   2   2

Ile Val Phe Phe Lys Ser Lys Gly Lys Leu Gln Ala Glu Leu Asp
                   2   2   2

Trp Arg Arg Lys His Gly Gln Ala Glu Leu Arg Asp Ala Arg Lys
                   27   2   2

His Ala Val Glu Val Thr Leu Asp Pro Glu Thr Ala His Pro Lys
                   2   2   280

Leu Cys Val Ser Asp Leu Lys Thr Val Thr His Arg Lys Ala Pro
                   2   2   295

Gln Glu Val Pro His Ser Glu Lys Arg Phe Thr Arg Lys Ser Val
                   3   3   3

Val Ala Ser Gln Gly Phe Gln Ala Gly Arg His Tyr Trp Glu Asn
                   3   40   3

Asp Val Gly Gln Asn Val Gly Trp Tyr Val Gly Val Cys Arg Asp
                   3   3   3

Asp Val Asp Arg Gly Lys Asn Asn Val Thr Leu Ser Pro Asn Asn
                   3   3   3

Gly Tyr Trp Val Leu Arg Leu Thr Thr Val His Leu Tyr Phe Val
                   3   325   330

Phe Asn Pro His Phe Ile Ser Leu Pro Pro Ser Thr Pro Pro Thr

132

```
                395               400               405

Arg Val Gly Val Phe Leu Asp Tyr Glu Gly Gly Thr Ile Ser Phe
            410               415               420

Phe Asn Thr Asn Asp Gln Ser Leu Ile Tyr Thr Leu Leu Thr Cys
            425               430               435

Gln Phe Glu Gly Leu Leu Arg Pro Tyr Ile Gln His Ala Met Tyr
            440               445               450

Asp Glu Glu Lys Gly Thr Pro Ile Phe Ile Cys Pro Val Ser Trp
            455               460               465

Gly
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<210> 105
<211> 2103
<212> DNA
<213> Homo Sapien

<400> 105

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gtcatcttca tatcctgat  tgtcctggca gtgtgcattg gactcactgt  150
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tgtcatttac aactgacaaa ctatatgctg agtttggcag agaggcttct  250
aacaatttta cagaaatgag ccagagactt gaatcaatgg tgaaaaatgc  300
attttataaa tctccattaa gggaagaatt tgtcaagtct caggttatca  350
agttcagtca acagaagcat ggagtgttgg ctcatatgct gttgatttgt  400
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ctcactcagt taaaattaaa aaaatcaaca agacagaaac agacagctat  ...
ctaaaccatt gctgcggaac acgaagaagt aaaactctag gtcagagtct  600
caggatcgtt ggtgcgacag aagtagaaga gggtgaatgg ccctggcagg  6..
ctagcctgca gtggcatggg agtcatcgct gtggagcaac cttaattaat  7..
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catgactatg atatttctct tgcagagctt tctagccctg ttccctacac  900
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caggtgatgt gatgtttgtg acaggatttg gagcactgaa aaatgatggt  1000
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133

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tatgtgctgg ctccttagaa ggaaaaacag atgcatgcca gggtgactct 1150

ggagaacgac tggttagttc agatgctaga gatatctggt accttgctgg 1200

aatactgagc tggggagatg aatgtgcgaa acccaacaag cctggtgttt 1250

atactatagt tacggccttg cgggactgga ttacttcaaa aactggtatc 1300

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gctagatttg actgatctca ataaactgtt tgcttgatgc atgtattttc 1450

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atacaatatt acattacagc ctgtattcat ttgttctcta gaagttttgt 1600

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aatatcaatc acttcatcat ttaggaagta tgggaactaa gttaaggaag 1900

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caaacttcat gcaatgtact tgttctaagc aaattaaagc aaatatttat 2050

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cca 2103

<210> 106
<211> 43
<212> PRT
<213> Homo Sapien

<400> 106
Met Met Tyr Arg Pro Asp Val Val Arg Ala Arg Lys Arg Val Cys
            5   10   15

Trp Glu Pro Trp Val Ile Gly Leu Val Ile Phe Ile Ser Leu Ile
            20   25   30

Val Leu Ala Val Lys Ser Gly Leu Thr Val His Tyr Val Arg Tyr
            35   40

Asn Gln Lys Lys Thr Tyr Asn Tyr Tyr Ser Thr Leu Ser Phe Thr
            50   55   60

134

Thr Asp Lys Leu Tyr Ala Glu Phe Gly Arg Glu Ala Ser Asn Asn
        65   70   75

Phe Thr Glu Met Ser Gln Arg Leu Glu Ser Met Val Lys Asn Ala
        80   85   90

Phe Tyr Lys Ser Pro Leu Arg Glu Glu Phe Val Lys Ser Gln Val
        95   100   105

Ile Lys Phe Ser Gln Gln Lys His Gly Val Leu Ala His Met Leu
        110   115   120

Leu Ile Cys Arg Phe His Ser Thr Glu Asp Pro Glu Thr Val Asp
        125   130   135

Lys Ile Val Gln Leu Val Leu His Glu Lys Leu Gln Asp Ala Val
        140   145   150

Gly Pro Pro Lys Val Asp Pro His Ser Val Lys Ile Lys Lys Ile
        155   160   165

Asn Lys Thr Glu Thr Asp Ser Tyr Leu Asn His Cys Cys Gly Thr
        170   175   180

Arg Arg Ser Lys Thr Leu Gly Gln Ser Leu Arg Ile Val Gly Gly
        185   190   195

Thr Glu Val Glu Glu Gly Glu Trp Pro Trp Gln Ala Ser Leu Gln
        200   205   210

Trp Asp Gly Ser His Arg Cys Gly Ala Thr Leu Ile Asn Ala Thr
        215   220   225

Trp Leu Val Ser Ala Ala His Cys Phe Thr Thr Tyr Lys Asn Pro
        230   235   240

Ala Arg Trp Thr Ala Ser Phe Gly Val Thr Ile Lys Pro Ser Lys
        245   250   255

Met Lys Arg Gly Leu Arg Arg Ile Ile Val His Glu Lys Tyr Lys
        260   265   270

His Pro Ser His Asp Tyr Asp Ile Ser Leu Ala Glu Leu Ser Ser
        275   280   285

Pro Val Pro Tyr Thr Asn Ala Val His Arg Val Cys Leu Pro Asp
        290   295   300

Ala Ser Tyr Glu Phe Gln Pro Gly Asp Val Met Phe Val Thr Gly
        305   310   315

Phe Gly Ala Leu Lys Asn Asp Gly Tyr Ser Gln Asn His Leu Arg
        320   325   330

Gln Ala Gln Val Thr Leu Ile Asp Ala Thr Thr Cys Asn Glu Pro
        335   340   345

Gln Ala Tyr Asn Ser Ala Ile Thr Pro Arg Met Leu Cys Ala Gly
        350   355   360

Ser Leu Glu Gly Lys Thr Asp Ala Cys Gln Gly Asp Ser Gly Gly
        365   370   375

135

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Pro Leu Val Ser Ser Asp Ala Arg Asp Ile Trp Tyr Leu Ala Gly
          380                385                390

Ile Val Ser Trp Gly Asp Glu Cys Ala Lys Pro Asn Lys Pro Gly
          395                400                405

Val Tyr Thr Arg Val Thr Ala Leu Arg Asp Trp Ile Thr Ser Lys
          410                415                420

Thr Gly Ile
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<210> 107
<211> 2397
<212> DNA
<213> Homo Sapien

<400> 107

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<211> 305
<212> PRT
<213> Homo Sapien

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            20   25   30

137

Val Ser Ala Trp Met Arg Asp Tyr Leu Asn Asn Val Leu Thr Leu
              35   40   45

Thr Ala Glu Thr Arg Val Glu Glu Ala Val Ile Leu Thr Tyr Phe
              50   55   60

Pro Val Val His Pro Val Met Ile Ala Val Cys Cys Phe Leu Ile
              65   70   75

Ile Val Gly Met Leu Gly Tyr Cys Gly Thr Val Lys Arg Asn Leu
              80   85   90

Leu Leu Leu Ala Trp Tyr Phe Gly Ser Leu Leu Val Ile Phe Cys
              95   100   105

Val Glu Leu Ala Cys Gly Val Trp Thr Tyr Glu Gln Glu Leu Met
              110   115   120

Val Pro Val Gln Trp Ser Asp Met Val Thr Leu Lys Ala Arg Met
              125   130   135

Thr Asn Tyr Gly Leu Pro Arg Tyr Arg Trp Leu Thr His Ala Trp
              140   145   150

Asn Phe Phe Gln Arg Glu Phe Lys Cys Cys Gly Val Val Tyr Phe
              155   160   165

Thr Asp Trp Leu Glu Met Thr Glu Met Asp Trp Pro Pro Asp Ser
              170   175   180

Cys Cys Val Arg Glu Phe Pro Gly Cys Ser Lys Gln Ala His Gln
              185   190   195

Glu Asp Leu Ser Asp Leu Tyr Gln Glu Gly Cys Gly Lys Lys Met
              200   205   210

Tyr Ser Phe Leu Arg Gly Thr Lys Gln Leu Gln Val Leu Arg Phe
              215   220   225

Leu Gly Ile Ser Ile Gly Val Thr Gln Ile Leu Ala Met Ile Leu
              230   235   240

Thr Ile Thr Leu Leu Trp Ala Leu Tyr Tyr Asp Arg Arg Glu Pro
              245   250   255

Gly Thr Asp Gln Met Met Ser Leu Lys Asn Asp Asn Ser Gln His
              260   265   270

Leu Ser Cys Pro Ser Val Glu Leu Leu Lys Pro Ser Leu Ser Arg
              275   280   285

Ile Phe Glu His Thr Ser Met Ala Asn Tyr Phe Asn Thr His Phe
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Glu Met Glu Glu Leu
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<210> 104
<211> 2339
<212> DNA
<213> Homo Sapien

<400> 109

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<212> PRT
<213> Homo Sapien

<400> 110
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Ser Val Ser Pro Val Ala Leu Asp Pro Cys Ser Ala Tyr Ile Ser
            20   25   30

Leu Asn Glu Pro Trp Arg Asn Thr Asp His Gln Leu Asp Glu Ser
            35   40   45

Gln Gly Pro Pro Leu Cys Asp Asn His Val Asn Gly Glu Trp Tyr
            50   55   60

His Phe Thr Gly Met Ala Gly Asp Ala Met Pro Thr Phe Cys Ile
            65   70   75

Pro Glu Asn His Cys Gly Thr His Ala Pro Val Trp Leu Asn Gly
            80   85   90

Ser His Pro Leu Glu Gly Asp Gly Ile Val Gln Arg Gln Ala Cys
            95   100   105

Ala Ser Phe Asn Gly Asn Cys Cys Leu Trp Asn Thr Thr Val Glu
            110   115   120

Val Lys Ala Cys Pro Gly Gly Tyr Tyr Val Tyr Arg Leu Thr Lys

140

Pro Ser Val Cys Phe His Val Tyr Cys Gly His Phe Tyr Asp Ile
     140   145   150

Cys Asp Glu Asp Cys His Gly Ser Cys Ser Asp Thr Ser Glu Cys
     155   160   165

Thr Cys Ala Pro Gly Thr Val Leu Gly Pro Asp Arg Gln Thr Cys
     170   175   180

Phe Asp Glu Asn Glu Cys Glu Gln Asn Asn Gly Gly Cys Ser Glu
     185   190   195

Ile Cys Val Asn Leu Lys Asn Ser Tyr Arg Cys Glu Cys Gly Val
     200   205   210

Gly Arg Val Leu Arg Ser Asp Gly Lys Thr Cys Glu Asp Val Glu
     215   220   225

Gly Cys His Asn Asn Asn Gly Gly Cys Ser His Ser Cys Leu Thr
     230   235   240

Ser Glu Lys Gly Tyr Gln Cys Glu Cys Pro Arg Gly Leu Val Leu
     245   250   255

Ser Glu Asp Asn His Thr Cys Gln Val Pro Val Leu Cys Lys Ser
     260   265   270

Asn Ala Ile Glu Val Asn Ile Pro Arg Glu Leu Val Gly Gly Leu
     275   280   285

Glu Leu Phe Leu Thr Asn Thr Ser Cys Arg Gly Val Ser Asn Gly
     290   295   300

Thr His Val Asn Ile Leu Phe Ser Leu Lys Thr Cys Gly Thr Val
     305   310   315

Val Asp Val Val Asn Asp Lys Ile Val Ala Ser Asn Leu Val Thr
     320   325   330

Gly Leu Pro Lys Gln Thr Pro Gly Ser Ser Gly Asp Phe Ile Ile
     335   340   345

Arg Thr Ser Lys Leu Leu Ile Pro Val Thr Cys Glu Phe Pro Arg
     350   355   360

Leu Tyr Thr Ile Ser Glu Gly Tyr Val Thr Asn Leu Arg Asn Ser
     365   370   375

Pro Leu Glu Ile Met Ser Arg Asn His Gly Ile Phe Pro Phe Thr
     380   385   390

Leu Glu Ile Phe Lys Asp Asn Glu Phe Glu Glu Pro Tyr Arg Glu
     395   400   405

Ala Leu Pro Thr Leu Lys Leu Arg Asp Ser Leu Tyr Phe Gly Ile
     410   415   420

Gln Pro Val Val His Val Ser Gly Leu Gln Ser Leu Val Ala Ser
     425   430   435

Cys Phe Ala Thr Pro Thr Ser Lys Ile Asp Glu Val Leu Lys Tyr

Tyr Leu Ile Arg Asp Gly Cys Val Ser Asp Asp Ser Val Lys Gln
              455   460   465

Tyr Thr Ser Arg Asp His Leu Ala Lys His Phe Gln Val Pro Val
              470   475   480

Phe Lys Phe Val Gly Lys Asp His Lys Glu Val Phe Leu His Cys
              485   490   495

Arg Val Leu Val Cys Gly Val Leu Asp Glu Arg Ser Arg Cys Ala
              500   505   510

Gln Gly Cys His Arg Arg Met Arg Arg Gly Ala Gly Gly Glu Asp
              515   520   525

Ser Ala Gly Leu Gln Gly Gln Thr Leu Thr Gly Gly Pro Ile Arg
              530   535   540

Ile Asp Trp Glu Asp
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<211> 2063
<212> DNA
<213> Homo Sapien.

<400> 111
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(211) 112
(211) 112
(212) PRT
(213) Homo Sapien

(400) 112
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                   5   10   15

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              20   25   30

  Lys Val Gly Ile Pro Ile Ile Ile Ala Leu Leu Ser Leu Ala Ser

143

Ile Ile Ile Val Val Val Leu Ile Lys Val Ile Leu Asp Lys Tyr
50   55   60

Tyr Phe Leu Cys Gly Gln Pro Leu His Phe Ile Pro Arg Lys Gln
65   70   75

Leu Cys Asp Gly Glu Leu Asp Cys Pro Leu Gly Glu Asp Glu Glu
80   85   90

His Cys Val Lys Ser Phe Pro Glu Gly Pro Ala Val Ala Val Arg
95   100   105

Leu Ser Lys Asp Arg Ser Thr Leu Gln Val Leu Asp Ser Ala Thr
110   115   120

Gly Asn Trp Phe Ser Ala Cys Phe Asp Asn Phe Thr Glu Ala Leu
125   130   135

Ala Glu Thr Ala Cys Arg Gln Met Gly Tyr Ser Arg Ala Val Glu
140   145   150

Ile Gly Pro Asp Gln Asp Leu Asp Val Val Glu Ile Thr Glu Asn
155   160   165

Ser Gln Glu Leu Arg Met Arg Asn Ser Ser Gly Pro Cys Leu Ser
170   175   180

Gly Ser Leu Val Ser Leu His Cys Leu Ala Cys Gly Lys Ser Leu
185   190   195

Lys Thr Pro Arg Val Val Gly Gly Glu Gln Ala Ser Val Asp Ser
200   205   210

Trp Pro Trp Gln Val Ser Ile Gln Tyr Asp Lys Gln His Val Cys
215   220   225

Gly Gly Ser Ile Leu Asp Pro His Trp Val Leu Thr Ala Ala His
230   235   240

Cys Phe Arg Lys His Thr Asp Val Phe Asn Trp Lys Val Arg Ala
245   250   255

Gly Ser Asp Lys Leu Gly Ser Phe Pro Ser Leu Ala Val Ala Lys
260   265   270

Ile Ile Ile Ile Glu Phe Asn Pro Met Tyr Pro Lys Asp Asn Asp
275   280   285

Ile Ala Leu Met Lys Leu Gln Phe Pro Leu Thr Phe Ser Gly Thr
290   295   300

Val Arg Pro Ile Lys Leu Pro Phe Phe Asp Glu Glu Leu Thr Pro
305   310   315

Ala Thr Pro Leu Trp Ile Ile Gly Trp Gly Phe Thr Lys Gln Asn
320   325   330

Gly Gly Lys Met Ser Asp Ile Leu Leu Gln Ala Ser Val Gln Val
335   340   345

Ile Asp Ser Thr Arg Cys Asn Ala Asp Asp Ala Tyr Gln Gly Glu

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Val Thr Glu Lys Met Met Cys Ala Gly Ile Pro Glu Gly Gly Val
                365                 370                 375

Asp Thr Cys Gln Gly Asp Ser Gly Gly Pro Leu Met Tyr Gln Ser
                380                 385                 390

Asp Gln Trp His Val Val Gly Ile Val Ser Trp Gly Tyr Gly Cys
                395                 400                 405

Gly Gly Pro Ser Thr Pro Gly Val Tyr Thr Lys Val Ser Ala Tyr
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Leu Asn Trp Ile Tyr Asn Val Trp Lys Ala Glu Leu
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<210> 113
<211> 1768
<212> DNA
<213> Homo Sapien

<400> 113

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<210> 114
<211> 109
<213> PRT
<213> Homo Sapien

<400> 114
Met Leu Trp Trp Leu Val Leu Leu Leu Leu Pro Thr Leu Lys Ser
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Val Phe Cys Ser Leu Val Thr Ser Leu Tyr Leu Pro Asn Thr Glu
            20   25   30

Asp Leu Ser Leu Trp Leu Trp Pro Lys Pro Asp Leu His Ser Gly
            35   40   45

Thr Arg Thr Glu Val Ser Thr His Thr Val Pro Ser Lys Pro Gly
            50   55   60

Thr Ala Ser Pro Cys Trp Pro Leu Ala Gly Ala Val Pro Ser Pro
            65   70   75

Thr Val Ser Arg Leu Glu Ala Leu Thr Arg Ala Val Gln Val Ala
            80   85   90

Glu Pro Leu Gly Ser Cys Gly Phe Gln Gly Gly Pro Cys Pro Gly
            95   100   105

Arg Arg Arg Asp

<210> 115

<210> 1197
<212> DNA
<213> Homo Sapien

<400> 115
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ttgtggactg gtgtttggta tcctggccct aactctaatt gtcctgtttt 200

aggggagcaa gcacttctgg ccggaggtac ccaaaaaagc ctatgacatg 250

gagcacactt tctacagcaa tggagagaag aagaagattt acatggaaat 300

ttgatcctgtg accagaactg aaatattcag aagcggaaat ggcactgatg 350

aaacattgga agtgcacgac tttaaaaacg gatacactgg catctacttc 400

gtcggtcttc aaaaatgttt tatcaaaact cagattaaag tgattctga 450

attttctgaa ccagaagagg aaatagatga gaatgaagaa attaccacaa 500

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gaccatgtat tgcatcaatc ccactctaat atcagtttct gagttacaag 650

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atataataaa tgcatgctat tcaatgaatt tttgcctatg aggcatctgg 1100

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<210> 116
<211> 517
<212> PRT
<213> Homo Sapien

<400> 116
Met Ala Lys Asn Pro Pro Glu Asn Lys Glu Arg Cys His Ile Leu
1   5   10   15

Asn Ala Glu Ala Phe Lys Ser Lys Lys Ile Cys Lys Ser Leu Lys

147

Ile Cys Gly Leu Val Phe Gly Ile Leu Ala Leu Thr Leu Ile Val
          35   40   45

Leu Phe Trp Gly Ser Lys His Phe Trp Pro Glu Val Pro Lys Lys
          50   55   60

Ala Tyr Asp Met Glu His Thr Phe Tyr Ser Asn Gly Glu Lys Lys
          65   70   75

Lys Ile Tyr Met Glu Ile Asp Pro Val Thr Arg Thr Glu Ile Phe
          80   85   90

Arg Ser Gly Asn Gly Thr Asp Glu Thr Leu Glu Val His Asp Phe
          95   100   105

Lys Asn Gly Tyr Thr Gly Ile Tyr Phe Val Gly Leu Gln Lys Cys
          110   115   120

Pro Ile Lys Thr Glu Ile Lys Val Ile Pro Glu Phe Ser Glu Pro
          115   130   135

Glu Glu Glu Ile Asp Glu Asn Glu Glu Ile Thr Thr Thr Phe Phe
          140   145   150

Glu Gln Ser Val Ile Trp Val Pro Ala Glu Lys Pro Ile Glu Asn
          155   160   165

Arg Asp Phe Leu Lys Asn Ser Lys Ile Leu Glu Ile Cys Asp Asn
          170   175   180

Val Thr Met Tyr Trp Ile Asn Pro Thr Leu Ile Ser Val Ser Glu
          185   190   195

Leu Gln Asp Phe Glu Glu Glu Gly Glu Asp Leu His Phe Pro Ala
          200   205   210

Asn Glu Lys Lys Gly Ile Glu Gln Asn Glu Gln Trp Val Val Pro
          215   220   225

Gln Val Lys Val Glu Lys Thr Arg His Ala Arg Gln Ala Ser Ala
          230   235   240

Glu Glu Leu Pro Ile Asn Asp Tyr Thr Glu Asn Gly Ile Glu Phe
          245   250   255

Asp Pro Met Leu Asp Glu Arg Gly Tyr Lys Cys Ile Tyr Cys Arg
          260   265   270

Arg Gly Asn Arg Tyr Cys Arg Arg Val Lys Glu Pro Leu Leu Gly
          275   280   285

Tyr Tyr Pro Tyr Pro Tyr Cys Tyr Gln Gly Gly Arg Val Ile Cys
          290   295   300

Arg Val Ile Met Pro Cys Asn Trp Trp Val Ala Arg Met Leu Gly
          305   310   315

Arg Val

<211> 2121
<212> DNA
<213> Homo Sapien

<400> 117

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gtcctggtg ccattggcct cctggtatc atctttgctc tgaaatgcat 400

ccgtattggc agcatggagg act gca agc aacatg a act gcct 450

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gtacacggc atgggtggga tggtgcaga tgttcagacc agtacacat 600

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catctttgga gaggcaaat ggtcttagcc tcagtctctg tctctaaata 1050

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cccctcttc ctcctagtca ataaacccat tgatgatcta tttcccagct 1250

tatccccaag aaaactttg aaaggaaaga gtagacccaa agatgttatt 1300

ttctgctgtt tgaatttgt ctccccaccc ccaacttggc tagtaataaa 1350

cacttactga agaagagcu ataagaaaa gatattgta atctttctag 1400

cccatgatct cggttttctt acactgtgat cttaaaagtt accaaaccaa 1450
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149

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atttttttta atttaagtcc taaatatagt taaaataaat aatgttttag 1650

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gaaggaaatg aaaaaataat tgctttgaca ttgtctatat ggtactttgt 1750

aaagtcatgc ttaagtacaa attccatgaa aagctcacac ctgtaatcct 1800

tgcactttgt gaggctgagg aggaaggatc acttgagccc agaagttcga 1850

gactagcctg ggcaacatgg agaagccctg tctctacaaa atacagagag 1900

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aggctaaaac taattctttta a 2121

<210> 113
<211> 261
<212> PRT
<213> Homo Sapien

<400> 113
Met Ser Thr Thr Thr Cys Gln Val Val Ala Phe Leu Leu Ser Ile
1   5   10   15

Leu Gly Leu Ala Gly Cys Ile Ala Ala Thr Gly Met Asp Met Trp
              20   25   30

Ser Thr Gln Asp Leu Tyr Asp Asn Pro Val Thr Ser Val Phe Gln
              35   40   45

Tyr Glu Gly Leu Trp Arg Ser Cys Val Arg Gln Ser Ser Gly Phe
              50   55   60

Thr Glu Cys Arg Pro Tyr Phe Thr Ile Leu Gly Leu Pro Ala Met
              65   70   75

Leu Gln Ala Val Arg Ala Leu Met Ile Val Gly Ile Val Leu Gly
              80   85   90

Ala Ile Gly Leu Leu Val Ser Ile Phe Ala Leu Lys Cys Ile Arg
              95   100   105

Ile Gly Ser Met Glu Asp Ser Ala Lys Ala Asn Met Thr Leu Thr
              110   115   120

Ser Gly Glu Met Phe Ile Val Ser Gly Leu Tyr Ala Ile Ala Thr
              125   130   135

Val Ser Val Phe Ala Asn Met Leu Val Thr Asn Phe Trp Met Ser
              140   145   150

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Thr Ala Asn Met Tyr Thr Gly Met Gly Gly Met Val Gln Thr Val
              155                 160                 165

Gln Thr Arg Tyr Thr Phe Gly Ala Ala Leu Phe Val Gly Trp Val
              170                 175                 180

Ala Gly Gly Leu Thr Leu Ile Gly Gly Val Met Met Cys Ile Ala
              185                 190                 195

Cys Arg Gly Leu Ala Pro Glu Glu Thr Asn Tyr Lys Ala Val Ser
              200                 205                 210

Tyr His Ala Ser Gly His Ser Val Ala Tyr Lys Pro Gly Gly Phe
              215                 220                 225

Lys Ala Ser Thr Gly Phe Gly Ser Asn Thr Lys Asn Lys Lys Ile
              230                 235                 240

Tyr Asp Gly Gly Ala Arg Thr Glu Asp Gln Val Gln Ser Tyr Pro
              245                 250                 255

Ser Lys His Asp Tyr Val
              260
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tggaccaggg cactggtgct gattgttgga ggagctctgt tctgctgcgt 650
tttttgttgt aaagaaaga gcagtagcta cagatactcg ataacttccc 700
a      (illegible)                                      750
tactccagaa gtcagtatgt gtagttgtgt atgttttttt aactttacta 800
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caaagaaact ttgatttact gttcttaact gcctaatctt aattacagga 900

actgtgcatc agctatttat gattctataa gctatttcag cagaatgaga 950

tattaaaccc aatgctttga ttgttctaga aagtatagta atttgttttc 1000

taaggtggtt caagcatcta ctctttttat catttacttc aaaatgacat 1050

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tatggttttta tttaaaatga aatgccagtc cattacactg aataaataga 1200

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gaagattaaa atgaaggctt taatcagcac tgtaaaggaa attgaatggc 1350

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<210> 1.0
<211> 2.5
<212> PRT
<213> Homo Sapien

<400> 1.0
Met Ala Thr His Ala Leu Glu Ile Ala Gly Leu Phe Leu Gly Gly
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Val Gly Met Val Gly Ser Ala Ala Leu Thr Val Met Leu Gln Trp
            20   25   30

Arg Val Ser Ala Phe Ile Glu Asn Asn Ile Val Val Phe Glu Asn

152

Phe Trp Glu Gly Leu Trp Met Asn Cys Val Arg Gln Ala Asn Ile
      50   55   60

Arg Met Gln Cys Lys Ile Tyr Asp Ser Leu Leu Ala Leu Ser Pro
      65   70   75

Asp Leu Gln Ala Ala Arg Gly Leu Met Cys Ala Ala Ser Val Met
      80   85   90

Ser Phe Leu Ala Phe Met Met Ala Ile Leu Gly Met Lys Cys Thr
      95   100   105

Arg Cys Thr Gly Asp Asn Glu Lys Val Lys Ala His Ile Leu Leu
      110   115   120

Thr Ala Gly Ile Leu Phe Ile Ile Thr Gly Met Val Val Leu Ile
      125   130   135

Pro Val Ser Trp Val Ala Asn Ala Ile Ile Arg Asp Phe Tyr Asn
      140   145   150

Ser Ile Val Asn Val Ala Gln Lys Arg Glu Leu Gly Glu Ala Leu
      155   160   165

Tyr Leu Gly Trp Thr Thr Ala Leu Val Leu Ile Val Gly Gly Ala
      170   175   180

Leu Phe Cys Cys Val Phe Cys Cys Asn Glu Lys Ser Ser Ser Tyr
      185   190   195

Arg Tyr Ser Ile Pro Ser His Arg Thr Thr Gln Lys Ser Tyr His
      200   205   210

Thr Gly Lys Lys Ser Pro Ser Val Tyr Ser Arg Ser Gln Tyr Val
      215   220   225

<210> 1.1
<211> 1.57
<212> DNA
<213> Homo Sapien

<400> 1.1
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actacaagca gtgttcatgg agttcattga attatggcat agatcttggg 500

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<210> 122
<211> 243
<212> PRT
<213> Homo Sapien

<400> 122
Met Arg Pro Gln Gly Pro Ala Ala Ser Pro Gln Arg Leu Arg Gly
 1   5   10   15

Leu Leu Leu Leu Leu Leu Leu Gln Leu Pro Ala Pro Ser Ser Ala
                20   25   30

Ser Glu Ile Pro Lys Gly Lys Gln Lys Ala Gln Leu Arg Gln Arg
                35   40   45

Glu Val Val Asp Leu Tyr Asn Gly Met Cys Leu Gln Gly Pro Ala
                50   55   60

Gly Val Pro Gly Arg Asp Gly Ser Pro Gly Ala Asn Val Ile Pro
                65   70   75

Gly Thr Pro Gly Ile Pro Gly Arg Asp Gly Phe Lys Gly Glu Lys
                80   85   90

Gly Gln Cys Leu Arg Glu Ser Phe Glu Glu Ser Trp Thr Pro Asn
                95   100   105

Tyr Lys Gln Cys Ser Trp Ser Ser Leu Asn Tyr Gly Ile Asp Leu
                110   115   120

154

Gly Lys Ile Ala Glu Cys Thr Phe Thr Lys Met Arg Ser Asn Ser
          125   130   135

Ala Leu Arg Val Leu Phe Ser Gly Ser Leu Arg Leu Lys Cys Arg
          140   145   150

Asn Ala Cys Cys Gln Arg Trp Tyr Phe Thr Phe Asn Gly Ala Glu
          155   160   165

Cys Ser Gly Pro Leu Pro Ile Glu Ala Ile Ile Tyr Leu Asp Gln
          170   175   180

Gly Ser Pro Glu Met Asn Ser Thr Ile Asn Ile His Arg Thr Ser
          185   190   195

Ser Val Glu Gly Leu Cys Glu Gly Ile Gly Ala Gly Leu Val Asp
          200   205   210

Val Ala Ile Trp Val Gly Thr Cys Ser Asp Tyr Pro Lys Gly Asp
          215   220   225

Ala Ser Thr Gly Trp Asn Ser Val Ser Arg Ile Ile Ile Glu Thr
          230   235   240

Leu Pro Lys

<210> 13
<211> 2379
<212> DNA
<213> Homo Sapien

<400> 13
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ggattcttgg atatccctca atgacatcag tcttgctggg aatatatggg 1450

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ctacagagag gtttgatctg gccagtgctc tcccaagcc gacgtttaag 1650

cccaagctcc ccaggccgaa gcatcagagc aaacccctctt tgcccccgac 1700

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<210> 104
<211> 513
<212> PRT
<213> Homo Sapien

<400> 104

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 1               5                   10                  15

Leu Val Ile Ala Pro Thr Val Leu Leu Thr Met Leu Ser Ser Ala
            20                  25                  30

Glu Arg Gly Cys Pro Lys Gly Cys Arg Cys Glu Gly Lys Met Val
            35                  40                  45

Tyr Cys Glu Ser Gln Lys Leu Gln Glu Ile Pro Ser Ser Ile Ser
            50                  55                  60

Ala Gly Cys Leu Gly Leu Ser Leu Arg Tyr Asn Ser Leu Gln Lys
            65                  70                  75

Leu Lys Tyr Asn Gln Phe Lys Gly Leu Asn Gln Leu Thr Trp Leu
            80                  85                  90

Tyr Leu Asp His Asn His Ile Ser Asn Ile Asp Glu Asn Ala Phe
            95                  100                 105

Asn Gly Ile Arg Arg Leu Lys Glu Leu Ile Leu Ser Ser Asn Arg
            110                 115                 120

Ile Ser Tyr Phe Leu Asn Asn Thr Phe Arg Pro Val Thr Asn Leu
            125                 130                 135

Arg Asn Leu Asp Leu Ser Tyr Asn Gln Leu His Ser Leu Gly Ser
            140                 145                 150

Glu Gln Phe Arg Gly Leu Arg Lys Leu Leu Ser Leu His Leu Arg
            155                 160                 165

Ser Asn Ser Leu Arg Thr Ile Pro Val Arg Ile Phe Gln Asp Cys
            170                 175                 180

Arg Asn Leu Glu Leu Leu Asp Leu Gly Tyr Asn Arg Ile Arg Ser
            185                 190                 195

Leu Ala Arg Asn Val Phe Ala Gly Met Ile Arg Leu Lys Glu Leu
            200                 205                 210

His Leu Gln His Asn Gln Phe Ser Lys Leu Asn Leu Ala Leu Phe
            215                 220                 225

Pro Arg Leu Val Tyr Leu Gln Asn Leu Tyr Leu Gln Trp Asn Lys
            230                 235                 240

Ile Ser Val Ile Gly Gln Thr Met Ser Trp Thr Trp Ser Ser Leu
            245                 250                 255

Gln Arg Leu Asp Leu Ser Gly Asn Glu Ile Glu Ala Phe Ser Gly
            260                 265                 270
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157

Pro Ser Val Phe Gln Cys Val Pro Asn Leu Gln Arg Leu Asn Leu
                275   280   285

Asp Ser Asn Lys Leu Thr Phe Ile Gly Gln Glu Ile Leu Asp Ser
                290   295   300

Trp Ile Ser Leu Asn Asp Ile Ser Leu Ala Gly Asn Ile Trp Gln
                305   310   315

Cys Ser Arg Asn Ile Cys Ser Leu Val Asn Trp Leu Lys Ser Phe
                320   325   330

Lys Gly Leu Arg Glu Asn Thr Ile Ile Cys Ala Ser Pro Lys Glu
                335   340   345

Leu Gln Gly Val Asn Val Ile Asp Ala Val Lys Asn Tyr Ser Ile
                350   355   360

Cys Gly Lys Ser Thr Thr Glu Arg Phe Asp Leu Ala Arg Ala Leu
                365   370   375

Pro Lys Pro Thr Pro Lys Pro Lys Leu Pro Arg Pro Lys His Glu
                380   385   390

Ser Lys Pro Pro Leu Pro Pro Thr Val Gly Ala Thr Glu Pro Gly
                395   400   405

Pro Glu Thr Asp Ala Asp Ala Glu His Ile Ser Phe His Lys Ile
                410   415   420

Ile Ala Gly Ser Val Ala Leu Phe Leu Ser Val Leu Val Ile Leu
                425   430   435

Leu Val Ile Tyr Val Ser Trp Lys Arg Tyr Pro Ala Ser Met Lys
                440   445   450

Gln Leu Gln Gln Arg Ser Leu Met Arg Arg His Arg Lys Lys Lys
                455   460   465

Arg Gln Ser Leu Lys Gln Met Thr Pro Ser Thr Gln Glu Phe Tyr
                470   475   480

Val Asp Tyr Lys Pro Thr Asn Thr Glu Thr Ser Glu Met Leu Leu
                485   490   495

Asn Gly Thr Gly Pro Cys Thr Tyr Asn Lys Ser Gly Ser Arg Glu
                500   505   510

Cys Glu Val

<210> 125
<211> 398
<212> DNA
<213> Homo Sapier

<400> 125
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gtccggctac gcggctaccg tggccgagct agcatccttt cccctggatc   150

ttacaaaaac tcgactccaa atgcaaggag aagcagctct tgctcggttg 200

ggagacggtg caagagaatc tgcccctat aggggaatgg tgcgcacagc 250

cctagggatc attgaagagg aaggctttct aaagctttgg caaggagtga 300

caccgccat ttacagacac gtagtgtatt ctggaggtcg aatggtcaca 350

tatgaacatc tccgagaggt tgtgtttggc aaaagtgaag atgagcatta 400

tcccctttgg aaatcagtca ttggagggat gatggctggt gttattggcc 450

agttttagc caatccaact gacctagtga aggttcagat gcaaatggaa 500

ggaaaaagga aactggaagg aaaaccattg cgatttcgtg gtgtacatca 550

tgcatttgca aaaatcttag ctgaaggagg aatacgaggg ctttggggcag 600

gctgggtacc caatatacaa agagcagcac tggtgaatat gggagattta 650

accacttatg atacagtgaa acactacttg gtattgaata caccacttga 700

agaaaatatc atgactcacg gtttatcaag tttatgttct ggactggtag 750

cttctattct gggaacacca gccgatgtca tcaaaagcag aataatgaat 800

caaccacgag ataaacaagg aagggactt ttgtataaat catcgactga 850

ctgcttgatt caggctgttc aaggtgaagg attcatgagt ctatataaag 900

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<210> 176
<211> 323
<212> PRT
<213> Homo Sapien

<400> 176
Met Ser Val Pro Glu Glu Glu Glu Arg Leu Leu Pro Leu Thr Gln
1   5   10   15

Arg Trp Pro Arg Ala Ser Lys Phe Leu Leu Ser Gly Cys Ala Ala
        20   25   30

Thr Val Ala Glu Leu Ala Thr Phe Pro Leu Asp Leu Thr Lys Thr
        35   40   45

Arg Leu Gln Met Gln Gly Glu Ala Ala Leu Ala Arg Leu Gly Asp
        50   55   50

Gly Ala Arg Glu Ser Ala Pro Tyr Arg Gly Met Val Arg Thr Ala
        65   70   75

Leu Gly Ile Ile Glu Glu Glu Gly Phe Leu Lys Leu Trp Gln Gly
        80   85   90

Val Thr Pro Ala Ile Tyr Arg His Val Val Tyr Ser Gly Gly Arg
        95   100   105

Met Val Thr Tyr Glu His Leu Arg Glu Val Val Phe Gly Lys Ser
        110   115   120

Glu Asp Glu His Tyr Pro Leu Trp Lys Ser Val Ile Gly Gly Met
                135   140   135

Met Ala Gly Val Ile Gly Gln Phe Leu Ala Asn Pro Thr Asp Leu
                140   145   150

Val Lys Val Gln Met Gln Met Glu Gly Lys Arg Lys Leu Glu Gly
                155   160   165

Lys Pro Leu Arg Phe Arg Gly Val His His Ala Phe Ala Lys Ile
                170   175   180

Leu Ala Glu Gly Gly Ile Arg Gly Leu Trp Ala Gly Trp Val Pro
                185   190   195

Asn Ile Gln Arg Ala Ala Leu Val Asn Met Gly Asp Leu Thr Thr
                200   205   210

Tyr Asp Thr Val Lys His Tyr Leu Val Leu Asn Thr Pro Leu Glu
                215   220   225

Asp Asn Ile Met Thr His Gly Leu Ser Ser Leu Cys Ser Gly Leu
                230   235   240

Val Ala Ser Ile Leu Gly Thr Pro Ala Asp Val Ile Lys Ser Arg
                245   250   255

Ile Met Asn Gln Pro Arg Asp Lys Gln Gly Arg Gly Leu Leu Tyr
                260   265   270

Lys Ser Ser Thr Asp Cys Leu Ile Gln Ala Val Gln Gly Glu Gly
                275   280   285

Phe Met Ser Leu Tyr Lys Gly Phe Leu Pro Ser Trp Leu Arg Met
                290   295   300

Thr Pro Trp Ser Met Val Phe Trp Leu Thr Tyr Glu Lys Ile Arg
                305   310   315

Glu Met Ser Gly Val Ser Pro Phe
                320

(210) 1_7
(211) 1505
(212) DNA
(213) Homo Sapien

(400) 1_7
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ggggtgggcc catgg?cagg ?ccggcatgg agc?gtggcg ?gaccggctg 150

gcgctggtga cgggg?cctc gggggggcatc ggc?cggccg tggcc?gggc 200

cctggtccag caggggactga aggt?gt?ggg ?t? gccgc actgtgggca 250

acatcgagga g?gg?t?g? ?a??? a?g? ?? ?a?gcta ???????? ???

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gttctgagct atccgttctc agcacagcgg tgtagacatc tgcatcaaca 400

atgctgctt ggcccggcct gacaccctgc tctcaggcag caccagtggt 450

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aaaaa 1505

<210> 128
<211> 250
<212> PRT
<213> Homo Sapien

<400> 128
Met Ala Arg Pro Gly Met Glu Arg Trp Arg Asp Arg Leu Ala Leu
1   5   10   15

Val Thr Gly Ala Ser Gly Gly Ile Gly Ala Ala Val Ala Arg Ala
                20   25   30

Leu Val Gln Gln Gly Leu Lys Val Val Gly Cys Ala Arg Thr Val
                35   40   45

161

Gly Asn Ile Glu Glu Leu Ala Ala Glu Cys Lys Ser Ala Gly Tyr
                    50   55   60

Pro Gly Thr Leu Ile Pro Tyr Arg Cys Asp Leu Ser Asn Glu Glu
                    65   70   75

Asp Ile Leu Ser Met Phe Ser Ala Ile Arg Ser Gln His Ser Gly
                    80   85   90

Val Asp Ile Cys Leu Asn Asn Ala Gly Leu Ala Arg Pro Asp Thr
                    95   100   105

Leu Leu Ser Gly Ser Thr Ser Gly Trp Lys Asp Met Phe Asn Val
                    110   115   120

Asn Val Leu Ala Leu Ser Ile Cys Thr Arg Glu Ala Tyr Gln Ser
                    125   130   135

Met Lys Glu Arg Asn Val Asp Asp Gly His Ile Ile Asn Ile Asn
                    130   135   140

Ser Met Ser Gly His Arg Val Leu Pro Leu Ser Val Thr His Phe
                    145   150   155

Tyr Ser Ala Thr Lys Tyr Ala Val Thr Ala Leu Thr Glu Gly Leu
                    155   175   180

Arg Gln Glu Leu Arg Glu Ala Gln Thr His Ile Arg Ala Thr Cys
                    185   190   195

Ile Ser Pro Gly Val Val Glu Thr Gln Phe Ala Phe Lys Leu His
                    190   200   210

Asp Lys Asp Pro Glu Lys Ala Ala Ala Thr Tyr Glu Gln Met Lys
                    215   220   225

Cys Leu Lys Pro Glu Asp Val Ala Glu Ala Val Ile Tyr Val Leu
                    230   235   240

Ser Thr Pro Ala His Ile Gln Ile Gly Asp Ile Gln Met Arg Pro
                    245   250   255

Thr Glu Gln Val Thr
                    260

<110> 129
<111> 1177
<112> DNA
<113> Homo Sapien

<400> 129
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162

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acatttattt tttattcttt ttagacagag tctcactctg tcacccaggc  550

tggagtgcag tggtgccatc tcagcttact gcaacctctg cctgccagt   600

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atcccactc  ctctctatcc ttcccaacct ctgatcacct cattctactc  1000

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tgcaatattt gtcttttctgt gcctggctta tttccttaa  cataatgact  1100

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aattaaaata accacacatg gcaaaaa 1177
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<210> 110
<211> 111
<212> PRT
<213> Homo Sapien

<400> 110
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Met Gly Leu Leu Leu Leu Val Leu Phe Leu Ser Leu Leu Pro Val
1               5                   10                  15

Ala Tyr Thr Ile Met Ser Leu Pro Pro Ser Phe Asp Cys Gly Pro
            20                  25                  30

Phe Arg Cys Arg Val Ser Val Ala Arg Glu His Leu Pro Ser Arg
            35                  40                  45

Gly Ser Leu Leu Arg Gly Pro Arg Pro Arg Ile Pro Val Leu Val
            50                  55                  60

Ser Cys Gln Pro Val Lys Gly His Gly Thr Leu Gly Glu Ser Pro
            65                  70                  75

Met Pro Phe Lys Arg Val Phe Cys Gln Asp Gly Asn Val Arg Ser
            80                  85                  90

Phe Cys Val Cys Ala Val His Phe Ser Ser His Gln Pro Pro Val
            95                  100                 105
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163

Ala Val Glu Cys Leu Lys
            110

<210> 131
<211> 2061
<212> DNA
<213> Homo Sapien

<400> 131
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tgtgtccctg cgatgctggt ttcatttact gtaatgatcg cttctgaca 200

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caaccaaata aataatgctg ggattccttc agatttgaaa aacttgctga 300

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aattaaccca tctcgaagga ggagtttgta atacacacca tattcctccc 1900

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gaagctacag agacagtggt attccagact cagatcactc acactcatga 2000

tgctgaagga cttcacagcag acttgtgttt tgggttttttt aaacctaagg 2050

gaggtgatgg t 2061

<210> 132
<211> 649
<212> PRT
<213> Homo Sapien

<400> 132
Met Ile Ser Ala Ala Trp Ser Ile Phe Leu Ile Gly Thr Lys Ile
 1   5   10   15

Gly Leu Phe Leu Gln Val Ala Pro Leu Ser Val Met Ala Lys Ser
            20   25   30

Cys Pro Ser Val Cys Arg Cys Asp Ala Gly Phe Ile Tyr Cys Asn
            35   40   45

Asp Arg Phe Leu Thr Ser Ile Pro Thr Gly Ile Pro Glu Asp Ala
            50   55   60

Thr Thr Leu Tyr Leu Gln Asn Asn Gln Ile Asn Asn Ala Gly Ile
            65   70   75

Pro Ser Asp Leu Lys Asn Leu Leu Lys Val Glu Arg Ile Tyr Leu
            80   85   90

Tyr His Asn Ser Leu Asp Glu Phe Pro Thr Asn Leu Pro Lys Tyr
            95   100   105

Val Lys Glu Leu His Leu Gln Glu Asn Asn Ile Arg Thr Ile Thr
            110   115   120

Tyr Asp Ser Leu Ser Lys Ile Pro Tyr Leu Glu Glu Leu His Leu
            125   130   135

Asp Asp Asn Ser Val Ser Ala Val Ser Ile Glu Glu Gly Ala Phe
140 145 150

Arg Asp Ser Asn Tyr Leu Arg Leu Leu Phe Leu Ser Arg Asn His
155 160 165

Leu Ser Thr Ile Pro Trp Gly Leu Pro Arg Thr Ile Glu Glu Leu
170 175 180

Arg Leu Asp Asp Asn Arg Ile Ser Thr Ile Ser Ser Pro Ser Leu
185 190 195

Gln Gly Leu Thr Ser Leu Lys Arg Leu Val Leu Asp Gly Asn Leu
200 205 210

Leu Asn Asn His Gly Leu Gly Asp Lys Val Phe Phe Asn Leu Val
215 220 225

Asn Leu Thr Glu Leu Ser Leu Val Arg Asn Ser Leu Thr Ala Ala
230 235 240

Pro Val Asn Leu Pro Gly Thr Asn Leu Arg Lys Leu Tyr Leu Gln
245 250 255

Asp Asn His Ile Asn Arg Val Pro Pro Asn Ala Phe Ser Tyr Leu
260 265 270

Arg Gln Leu Tyr Arg Leu Asp Met Ser Asn Asn Asn Leu Ser Asn
275 280 285

Leu Pro Gln Gly Ile Phe Asp Asp Leu Asp Asn Ile Thr Gln Leu
290 295 300

Ile Leu Arg Asn Asn Pro Trp Tyr Cys Gly Cys Lys Met Lys Trp
305 310 315

Val Arg Asp Trp Leu Gln Ser Leu Pro Val Lys Val Asn Val Arg
320 325 330

Gly Leu Met Cys Gln Ala Pro Glu Lys Val Arg Gly Met Ala Ile
335 340 345

Lys Asp Leu Asn Ala Glu Leu Phe Asp Lys Lys Asp Ser Gly Ile
350 355 360

Val Ser Thr Ile Gln Ile Thr Thr Ala Ile Pro Asn Thr Val Tyr
365 370 375

Pro Ala Gln Gly Gln Trp Pro Ala Pro Val Thr Lys Gln Pro Asp
380 385 390

Ile Lys Asn Pro Lys Leu Thr Lys Asp Gln Gln Thr Thr Gly Ser
395 400 405

Pro Ser Arg Lys Thr Ile Thr Ile Thr Val Lys Ser Val Thr Ser
410 415 420

Asp Thr Ile His Ile Ser Trp Lys Leu Ala Leu Pro Met Thr Ala
425 430 435

Leu Arg Leu Ser Trp Leu Lys Leu Gly His Ser Pro Ala Phe Gly
440 445 450

166

```
Ser Ile Thr Glu Thr Ile Val Thr Gly Glu Arg Ser Glu Tyr Leu
            455             460                         465

Val Thr Ala Leu Glu Pro Asp Ser Pro Tyr Lys Val Cys Met Val
            470             475                         480

Pro Met Glu Thr Ser Asn Leu Tyr Leu Phe Asp Glu Thr Pro Val
            485             490                         495

Cys Ile Glu Thr Glu Thr Ala Pro Leu Arg Met Tyr Asn Pro Thr
            500             505                         510

Thr Thr Leu Asn Arg Glu Gln Glu Lys Glu Pro Tyr Lys Asn Pro
            515             520                         525

Asn Leu Pro Leu Ala Ala Ile Ile Gly Gly Ala Val Ala Leu Val
            530             535                         540

Thr Ile Ala Leu Leu Ala Leu Val Cys Trp Tyr Val His Arg Asn
            545             550                         555

Gly Ser Leu Phe Ser Arg Asn Cys Ala Tyr Ser Lys Gly Arg Arg
            560             565                         570

Arg Lys Asp Asp Tyr Ala Glu Ala Gly Thr Lys Lys Asp Asn Ser
            575             580                         585

Ile Leu Glu Ile Arg Glu Thr Ser Phe Gln Met Leu Pro Ile Ser
            590             595                         600

Asn Glu Pro Ile Ser Lys Glu Glu Phe Val Ile His Thr Ile Phe
            605             610                         615

Pro Pro Asn Gly Met Asn Leu Tyr Lys Asn Asn His Ser Glu Ser
            620             625                         630

Ser Ser Asn Arg Ser Tyr Arg Asp Ser Gly Ile Pro Asp Ser Asp
            635             640                         645

His Ser His Ser
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aggctgccat ccagagatcc ctccactacc tcaagctgag tgatccccag 550

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ggaggataag caaagccacc ccgacaccca atcttggaag ccctgagtag 1800

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aataaagttc aactgcaact guuuuuuuuu aa 1882

<210> 134
<211> 440

<212> PRT
<213> Homo Sapien

<400> 134
Met Ser Ala Arg Gly Arg Trp Glu Gly Gly Gly Arg Arg Ala Cys
1   5   10   15

Arg Gly Ser Leu Gly Leu Ala Arg Ala Gln Gly Ala Glu Arg Val
                20   25   30

Thr Ser Ser Glu Gln Arg Pro Ala Met Ala Ser Leu Gly Leu Leu
                35   40   45

Leu Leu Leu Leu Leu Thr Ala Leu Pro Pro Leu Trp Ser Ser Ser
                50   55   60

Leu Pro Gly Leu Asp Thr Ala Glu Ser Lys Ala Thr Ile Ala Asp
                65   70   75

Leu Ile Leu Ser Ala Leu Glu Arg Ala Thr Val Phe Leu Glu Gln
                80   85   90

Arg Leu Pro Glu Leu Asn Leu Asp Gly Met Val Gly Val Arg Val
                95   100   105

Leu Glu Glu Gln Leu Lys Ser Val Arg Glu Lys Trp Ala Gln Glu
                110   115   120

Pro Leu Leu Gln Pro Leu Ser Leu Arg Val Gly Met Leu Gly Gln
                125   130   135

Lys Leu Glu Ala Ala Ile Gln Arg Ser Leu His Tyr Leu Lys Leu
                140   145   150

Ser Asp Pro Lys Tyr Leu Arg Glu Phe Gln Leu Thr Leu Gln Glu
                155   160   165

Gly Phe Trp Lys Leu Pro His Ala Trp Ile His Thr Asp Ala Ser
                170   175   180

Leu Val Tyr Pro Thr Phe Gly Pro Gln Asp Ser Phe Ser Glu Glu
                185   190   195

Arg Ser Asp Val Cys Leu Val Gln Leu Leu Gly Thr Gly Thr Asp
                200   205   210

Ser Ser Glu Pro Cys Gly Leu Ser Asp Leu Cys Arg Ser Leu Met
                215   220   225

Thr Lys Pro Gly Lys Ser Gly Tyr Cys Leu Ser His Gln Leu Leu
                230   235   240

Phe Phe Leu Trp Ala Arg Met Arg Gly Cys Thr Gln Gly Pro Leu
                245   250   255

Gln Gln Ser Gln Asp Tyr Ile Asn Leu Ile Cys Ala Asn Met Met
                260   265   270

Asp Leu Asn Ala Arg Ala Val Arg Ile Gly Tyr Ala Tyr Pro Thr
                275   280   285

Arg Asp Ile Phe Met Glu Asn Ile Met Phe Cys Gly Met Gly Gly
                290   295   300

169

Phe Ser Asp Phe Tyr Lys Leu Arg Trp Leu Glu Ala Ile Leu Ser
        305   310   315

Trp Gln Lys Gln Gln Glu Gly Cys Phe Gly Glu Pro Asp Ala Glu
        320   325   330

Asp Glu Glu Leu Ser Lys Ala Ile Gln Tyr Gln Gln His Phe Ser
        335   340   345

Arg Arg Val Lys Arg Arg Glu Lys Gln Phe Pro Asp Ser Arg Ser
        350   355   360

Val Ala Gln Ala Gly Val Gln Trp Arg Asn Leu Gly Ser Leu Gln
        365   370   375

Pro Leu Pro Pro Gly Phe Lys Gln Phe Ser Cys Leu Ile Leu Pro
        380   385   390

Ser Ser Trp Asp Tyr Arg Ser Val Pro Pro Tyr Leu Ala Asn Phe
        395   400   405

Tyr Ile Phe Leu Val Glu Thr Gly Phe His His Val Ala His Ala
        410   415   420

Gly Leu Glu Leu Leu Ile Ser Arg Asp Pro Pro Thr Ser Gly Ser
        425   430   435

Gln Ser Val Gly Leu
        440

<210> 135
<211> 384
<212> DNA
<213> Homo Sapien

<400> 135
 ggtctgagtg cagagctgct gtcatggtgg ccgctcctgt gggcttcttt 50

 cccgtcctgc tgctgctgct gctatcgggg gatgtccaga gctcggaggt 100

 gcccggggct gctgctgagg gatcgggagg gagtgtggtc ggcataggag 150

 atggcttcaa gattgagggg cgtgcagttg ttccagggt gaagcctcag 200

 gactggatct cggcggcccg agtgctggta gacggagaag agcacgtcgg 250

 tttccttaag acagatggga gttttgtggt tcatgatata ccttctggat 300

 cttatgtagt ggaacttgta tctccagctt acagatttga tcccgttcga 350

 gtggatatca cttcgaaagg aaaaatgaga gcaagatatg tgaattacat 400

 caaaacatca gaggtcgtca gactgcccta tcctctccaa atgaaatctt 450

 caggtccacc ttcttacttt attaaaaggg aatcgtgggg ctggacagac 500

 tttctaatga acccaatggt tatgatgatg gttcttcctt tattgatatt 550

 tgtgcttctg actaaagtgg tcaccacag tgatctgat atcagatgtt 600

 aaatggagca gtcaatgaat atgctgaatt ccaaccatga gttgcctgat 650

gtttctgagt tcatgacaag actcttctct tcaaaatcat ctggcaaatc 700

tagcagcggc agcagtaaaa caggcaaaag tggggctggc aaaaggaggt 750

agtcaggccg tccagagctg gcatttgcac aaacacggca acactgggtg 800

gcatccaagt cttggaaaac cgtgtgaagc aactactata aacttgagtc 850

atcccgacgt tgatctctta caactgtgta tgtt 884

<210> 136
<211> 242
<212> PRT
<213> Homo Sapien

<400> 136

Met Ala Ala Ala Leu Trp Gly Phe Phe Pro Val Leu Leu Leu Leu
1   5   10   15

Leu Leu Ser Gly Asp Val Gln Ser Ser Glu Val Pro Gly Ala Ala
            20   25   30

Ala Glu Gly Ser Gly Gly Ser Gly Val Gly Ile Gly Asp Arg Phe
            35   40   45

Lys Ile Glu Gly Arg Ala Val Val Pro Gly Val Lys Pro Gln Asp
            50   55   60

Trp Ile Ser Ala Ala Arg Val Leu Val Asp Gly Glu Glu His Val
            65   70

Gly Phe Leu Lys Thr Asp Gly Ser Phe Val Val His Asp Ile Pro
            80   85   90

Ser Gly Ser Tyr Val Val Glu Val Val Ser Pro Ala Tyr Arg Phe
            95   100   105

Asp Pro Val Arg Val Asp Ile Thr Ser Lys Gly Lys Met Arg Ala
            110   115   120

Arg Tyr Val Asn Tyr Ile Lys Thr Ser Glu Val Val Arg Leu Pro
            125   130   135

Tyr Pro Leu Gln Met Lys Ser Ser Gly Pro Pro Ser Tyr Phe Ile
            140   145   150

Lys Arg Glu Ser Trp Gly Trp Thr Asp Phe Leu Met Asn Pro Met
            155   160   165

Val Met Met Met Val Leu Pro Leu Leu Ile Phe Val Leu Leu Pro
            170   175   180

Lys Val Val Asn Tyr Ser Asp Pro Asp Met Arg Arg Glu Met Glu
            185   190   195

Gln Ser Met Asn Met Leu Asn Ser Asn His Glu Leu Pro Asp Val
            200   205   210

Met Leu Phe Met Thr Ala Leu Val Met Ser Lys Ser Gln Gly Leu
            215   220   225

Ser Ser Ser Gly Ser Ser Lys Thr Gly Lys Ser Gly Ala Gly Lys
            230   235   240

171

Arg Arg

<210> 137
<211> 1571
<212> DNA
<213> Homo Sapien

<400> 137
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gtgtgtctga ggggaccaga aggqtgagct acgttggctt tctggaaggg 100

gaggctatat gcgtcaattc cccaaaacaa gttttgacat ttcccctgaa 150

atgtcattct ctatctattc actgcaagtg cctgctgttc caggccttac 200

ctgctgggca ctaacggcgg agccaggatg gggacagaat aaaggagcca 250

cgacctgtgc caccaactcg cactcagact ctgaactcag acctgaaatc 300

ttctcttcac gggaggcttg gcagtttttc ttactcctgt ggtctccaga 350

tttcaggcct aagatgaaag cctctagtct tgccttcagc cttctctctg 400

ctgcgtttta tctcctatgg actccttcca ctggactgaa gacactcaat 450

ttggaagct gtgtgatcgc cacaaacctt caggaaatac gaaatggatt 500

ttctgagata cggggcagtg tgcagccaa agatggaaac attgacatca 550

gaatcttaag gaggactgag tcttgcaag acacaaagcc tgcgaatcga 600

tgctgcctcc tgcgccattt gctaagactc tatctggaca gggtatttaa 650

aaactaccag acccctgacc attatactct ccggaagatc agcagcctcg 700

ccaattcctt tcttaccatc aagaaggacc tccggctctc tcatgcccac 750

atgacatgcc attgtgggga ggaagcaatg aagaaataca gccagattct 800

gagtcacttt gaaaagctgg aacctcaggc agcagttgtg aaggcttt g 850

gggaactaga cattcttctg caatggatgg aggagacaga ataggaggaa 900

agtgatgctg ctgctaagaa tattcgaggt caagagctcc agtcttcaat 950

acctgcagag gaggcatgac cccaaaccac catctcttta ctgtactagt 1000

ctgtgctgg tcacagtgta tcttatttat gcattacttg cttccttgca 1050

tgattgtctt tatgcatccc caatcttaat tgagaccata cttgtataag 1100

atttttgtaa tatctttctg ctattggata tatttattag ttaatatatt 1150

tatttatttt ttgctatttta atgtatttat tttttttactt ggacatgaaa 1200

gtatttttat acagtaaaaa aaaaaaacct tgtaaattct agaagggtgg 1300

ctagggggt tattcatttg tattcaacta aggacatatt tactcatgct 1350

gatgctctgt gagatatttg aaattgaacc aatgactact taggatgggt 1400

tgtggaataa gttttgatgt ggaattgcac atctacctta caattactga 1450

ccatccccag tagactcccc agtcccataa ttgtgtatct tccagccagg 1500

aatcctacac ggccagcatg tatttctaca aataagtttt tctttgcata 1550

ccaaaaaaaa aaaaaaaaaa a 1571

(210) 158
(211) 261
(212) PRT
(213) Homo Sapien

(400) 158
Met Arg Gln Phe Pro Lys Thr Ser Phe Asp Ile Ser Pro Glu Met
1   5   10   15

Ser Phe Ser Ile Tyr Ser Leu Gln Val Pro Ala Val Pro Gly Leu
            25   20

Thr Cys Trp Ala Leu Thr Ala Glu Pro Gly Trp Gly Gln Asn Lys
            35   40   45

Gly Ala Thr Thr Cys Ala Thr Asn Ser His Ser Asp Ser Glu Leu
            50   55   60

Arg Pro Glu Ile Phe Ser Ser Arg Glu Ala Trp Gln Phe Phe Leu
            65   70   75

Leu Leu Trp Ser Pro Asp Phe Arg Pro Lys Met Lys Ala Ser Ser
            80   85   90

Leu Ala Phe Ser Leu Leu Ser Ala Ala Phe Tyr Leu Leu Trp Thr
            95   100   105

Pro Ser Thr Gly Leu Lys Thr Leu Asn Leu Gly Ser Cys Val Ile
            110   115   120

Ala Thr Asn Leu Gln Glu Ile Arg Asn Gly Phe Ser Glu Ile Arg
            125   130   135

Gly Ser Val Gln Ala Lys Asp Gly Asn Ile Asp Ile Arg Ile Leu
            140   145   150

Arg Arg Thr Glu Ser Leu Gln Asp Thr Lys Pro Ala Asn Arg Cys
            155   160   165

Cys Leu Leu Arg His Leu Leu Arg Leu Tyr Leu Asp Arg Val Phe
            170   175   180

Lys Asn Tyr Gln Thr Pro Asp His Tyr Thr Leu Arg Lys Ile Ser
            185   190   195

Ser Leu Ala Asn Ser Phe Leu Thr Ile Lys Lys Asp Leu Arg Leu
            200   205   210

Ser His Ala His Met Thr Lys His Lys Tyr Asp Gln Ala Met Lys
            215   220   225

Lys Tyr Ser Gln Ile Leu Ser His Phe Glu Lys Leu Gln Pro Gln

Ala Ala Val Val Lys Ala Leu Gly Glu Leu Asp Ile Leu Leu Gln
            245   250   255

Trp Met Glu Glu Thr Glu
                260

<210> 179
<211> 2495
<212> DNA
<213> Homo Sapien

<400> 179

gcttgagccg caagcgcggc tgcagcaggg cgagcctcca ggtgcggtcg 50

gttccgcatc cagcctagcg tgtccacgat gcggctgggc tccggactt 100

tcgctagctg ttggctagcg atcgaggtgc tagggatcgc ggtcttcctt 150

cagggatcct tccggcctcc cgttccttcc tctgccagtg ccgaacacgg 200

agcggagccc ccagcgctcg aaccctcggc tgcagccagt tctaactgga 250

ccaggctgcc accacctctc ttcagtaaag ttgttattgt tctgatagat 300

gccttgagag atgattttgt gcttggctca aagcgtgtga aatttatgcc 350

ctacacaact taccttgtgg aaaaaggagc atctcacagt tttgtggctg 400

aagcaaagcc acctacagtt actatgcctc gaatcaaggc attgatgacg 450

gggagccttc ctggctttgt cgacgtcatc agcaacctca attctcctgc 500

actgctgaaa gacactgtga taagacaagc aaaagcagct ggaaaaagaa 550

tagtctttta tggcgatgaa acctgggtta aatcattccc aaagcatttt 600

gtggaatatg atggacaac ctcatttttc gtttcagatt acacagaggt 650

ggataataat gtcacgaggc atttggataa agtattaaaa agaggagatt 700

gggacatatt aatcctccac tacctggggc tgaaccacat tggccacatt 750

tcaggcccca acagccctt gattgggcag aacctgagcg agatggacag 800

cgtgctgatg aagatccaca cctcactgca gtcgaaggag agagagacgc 850

cttacccaa tttgctggtt ctttgttgtg accatggcat gtctgaaaca 900

ggaagtcacg gggcctcctc caccgaggag gtgaatacac ctctgatttt 950

aatcattct gcgttgaaa ggaaacccgg tgtatccgaa catccaaagc 1000

acatccaata gacggatgtg gctgcgacac tggggatagc acttggctta 1050

ccgattccaa aagacagtgt agggagcctc ctattcccag ttgtggaagg 1100

aaaatcattt agaaatcaat tgacatttt attggact tggtgaaaa 1150

ttagtaaact gttgcaagag aatgtgccgt catatgaaaa agatcctggg 1200

tttgagcagt ttaaaatgtc agaaagattg catgggaact ggatcagact 1250

gtacttggag gaaaagcatt cagaagtcct attcaacctg ggctccaagg 1350

ttttcagtca gtacctggat gctctgaaga cgctgagctt gtccctgagt 1400

gcacaagtgg cccagttctc accctgctcc tgctcagcgt cccacaggca 1450

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tctgctcttt tatttggtga tcctggttct ttcggccgtt cacgtcattg 1500

tgtgcaactc agctcaaagt tcgtgctact tctgtggcct ctcgtggctg 1550

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gccaagtact ggcagtgccc tggacagggg gcctcaggga aggacgtgga 1650

gcagccttat cccacgcctc tgggtgtccc gacacaggtg ttcacatctg 1700

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caactgatgg ggtgtgtgaa tcggacagcc tcccagcaga ggtgtcggag 1850

cttcagctga gggaagaaga gacaatcggc ctggacactc aggagggtca 1900

aaaggagact ttgttcgcacc actcatcctg ccacccccag aatgcatcct 1950

gcttcatcag gtccagattt cttttccaagg cggacgtttt ctgtttggaat 2000

tcttagtcct tggcctcgga cacctccatt cgttagctgg ggagtggtgg 2050

tgaaggcagtg aagaagaggc gggatggtcac actcagatcc acagagccca 2100

ggatcaaggg acccactgca gtggcagcag gactgttggg cccccacccc 2150

aacctacaac agcccctcatc ccctcttggc ttgagccgtc agaggccctg 2200

tgctgacagt ccgacccgaga cactcacagc tttgtcatca gggcacaggc 2250

ttcctccgag ccaggatgat ctgtgccacg cctgccactc gggcccatct 2300

cggcctcatgc tctctctcct gctattgaat tagtacctag ctgcacacag 2350

catataattta ccaaaagaat aaacggcaat aattgagaaa aaaaa 2395

<210> 140
<211> 310
<212> PRT
<213> Homo Sapien

<400> 140
Met Arg Leu Gly Ser Gly Thr Phe Ala Thr Cys Cys Val Ala Ile
1   5   10   15

Glu Val Leu Gly Ile Ala Val Phe Leu Arg Gly Phe Phe Pro Ala
            20   25   30

Pro Val Arg Ser Ser Ala Arg Ala Glu His Gly His Gln Pro Pro
        35   40   45

Ala Pro Glu Pro Ser Ala Gly Ala Ser Ser Asn Trp Thr Thr Leu

175

Pro Pro Pro Leu Phe Ser Lys Val Val Ile Val Leu Ile Asp Ala
        65   70   75

Leu Arg Asp Asp Phe Val Phe Gly Ser Lys Gly Val Lys Phe Met
        80   85   90

Pro Tyr Thr Thr Tyr Leu Val Glu Lys Gly Ala Ser His Ser Phe
        95   100   105

Val Ala Glu Ala Lys Pro Pro Thr Val Thr Met Pro Arg Ile Lys
        110   115   120

Ala Leu Met Thr Gly Ser Leu Pro Gly Phe Val Asp Val Ile Arg
        125   130   135

Asn Leu Asn Ser Pro Ala Leu Leu Glu Asp Ser Val Ile Arg Gln
        140   145   150

Ala Lys Ala Ala Gly Lys Arg Ile Val Pro Tyr Gly Asp Glu Tyr
        155   160   165

Trp Val Lys Leu Phe Pro Lys His Phe Val Glu Tyr Asp Gly Thr
        170   175   180

Thr Ser Phe Phe Val Ser Asp Tyr Thr Glu Val Asp Asn Asn Val
        185   190   195

Thr Arg His Leu Asp Lys Val Leu Lys Arg Gly Asp Trp Asp Ile
        200   205   210

Leu Ile Leu His Tyr Leu Gly Leu Asp His Ile Gly His Ile Ser
        215   220   225

Gly Pro Asn Ser Pro Leu Ile Gly Gln Lys Leu Ser Glu Met Asp
        230   235   240

Ser Val Leu Met Lys Ile His Thr Ser Leu Gln Ser Lys Glu Arg
        245   250   255

Glu Thr Pro Leu Phe Asn Leu Leu Val Leu Cys Gly Asp His Gly
        260   265   270

Met Ser Glu Thr Gly Ser His Gly Ala Ser Ser Thr Glu Glu Val
        275   280   285

Asn Thr Pro Leu Ile Leu Ile Ser Ser Ala Phe Glu Arg Lys Pro
        290   295   300

Gly Asp Ile Arg His Pro Lys His Val Gln
        305   310

<210> 141
<211> 754
<212> DNA
<213> Homo Sapien

<400> 141
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agctactgcc ctacagaaag ttactagtgc cctaaagctg gcgctggcac 100

tgatgttact gctgctgttg gagtacaact tccctataga aaacaactgc 150

cagcacctta agaccactca caccttcaga gtgaagaact taaaaccgaa 200

gaaattcagc attcatgacc aggatcacaa agtactggtc ctggactctg 250

ggaatctcat agcagttcca gataaaaact acatacccc agagatcttc 300

tttgcattag cctcatcctt gagctcagcc tctgcgaaga aaggaagtcc 350

gattctcctg ggggtctcta aaggggagtt ttgtctttac tgtgacaagg 400

ataaaggaca aagtcatcca tcccttcagc tgaagaagga gaaactgatg 450

aagctggctg cccaaaagga atcagcacgc cggcccttca tcttttatag 500

ggctcaggtg ggctcctgta acatgctgga gtcggcagct caccccggat 550

ggttcatctg cacctcccgc aattgtaatg agcctgttgg ggtgacagat 600

aaatttgaga acaggaacca cattgaattt tcatttcacc cagtttgcaa 650

agctgaaatg agcccca gtg aggtcagcga ttaggaaact gccccattga 700

acgccttcct cgctaatttg aactaattgt ataaaaacac caaacctgct 750

cact 754

<210> 142
<211> 150
<212> PRT
<213> Homo Sapien

<400> 142
Met Leu Leu Leu Leu Leu Glu Tyr Asn Phe Pro Ile Glu Asn Asn
1   5   10   15

Lys Gln His Leu Lys Thr Thr His Thr Phe Arg Val Lys Asn Leu
16   20   30

Asn Pro Lys Lys Phe Ser Ile His Asp Gln Asp His Lys Val Leu
35   40   45

Val Leu Asp Ser Gly Asn Leu Ile Ala Val Pro Asp Lys Asn Tyr
50   55   60

Ile Arg Pro Glu Ile Phe Phe Ala Leu Ala Ser Ser Leu Ser Ser
65   70   75

Ala Ser Ala Glu Lys Gly Ser Pro Ile Leu Leu Gly Val Ser Lys
80   85   90

Gly Glu Phe Cys Leu Tyr Cys Asp Lys Asp Lys Gly Gln Ser His
95   110   105

Pro Ser Leu Gln Leu Lys Lys Glu Lys Leu Met Lys Leu Ala Ala
110   115   120

Gln Lys Glu Ser Ala Arg Arg Pro Phe Ile His Tyr Arg Ala Gln
125   130   135

Val Gly Ser Trp Asn Met Leu Glu Ser Ala Ala His Pro Gly Trp
140   145   150

177

```
Phe Ile Cys Thr Ser Cys Asn Cys Asn Glu Pro Val Gly Val Thr
            155                 160                 165

Asp Lys Phe Glu Asn Arg Lys His Ile Glu Phe Ser Phe Gln Pro
            170                 175                 180

Val Cys Lys Ala Glu Met Ser Pro Ser Gln Val Ser Asp
            185                 190
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<210> 143
<211> 961
<212> DNA
<213> Homo Sapien

<400> 143

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ctagagagta tagggcagaa ggatggcaga tgagtgactc cacatccaga  50

gctgcctccc tttaatccag gatcctgtcc ttcctgtcct gtaggagtgc  100

cggtgccag tgtgggtga gacaagtttg tcccacaggg ctgtctgagc  150

agtaagatt aagggctgg tctgtgctca attaactcct gtgggcacgg  200

ggtctgcaa gagcaaagtc agcggtgcct acagtcagca ccatgctggg  250

cctgccgtgg aaggcaggtc tgtcctgggc gctgctgctg cttctcttag  300

gctcccagat cctgctgatc tatgcctggc atttccacga gcaaagggac  350

tgtgatgaac acaatgtcat ggctcgttac ctccctgcca cagtggagtt  400

tgctgtccac acattcaacc aacagagcaa ggactactat gcctacagac  450

tgggcacat cttgaattcc tggaaggagc aggtcgagtc caagactgta  500

tttcaaggg agctactgct ggggagaact aggtctggga aatttgaaga  550

cgacattgac aactgccatt ccaagaaag cacagagctg aacaatactt  600

tcacctgctt cttcaccatc agcaccaggc cctgcatgac tcagttcagc  650

ctcctgaaca agacctgctt ggagggattc cactgagtca aacccactca  700

caggcttgtc catgtgctgc tcccacattc cgtgcacatc agcactactc  750

tcttgaggac tcttcagtgg ctgagcagct ttggacttgt ttgttatcct  800

attttgcatg tgtttgagat ctcagatcag tgtttagaa aatccacaca  850

tcttgagcct aatcatgtag tgtagatcat taaacatcag cattttaaga  900

aaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaaa  950

aaaaaaaaa a  961
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<210> 144
<211> 147
<212> PRT
<213> Homo Sapien

<400> 144

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Met Leu Gly Leu Pro Trp Lys Gly Gly Leu Ser Trp Ala Leu Leu
```

```
        1              5                      10                      15
    Leu Leu Leu Leu Gly Ser Gln Ile Leu Leu Ile Tyr Ala Trp His
                20                       25                      30

    Phe His Glu Gln Arg Asp Cys Asp Glu His Asn Val Met Ala Arg
                35                       40                      45

    Tyr Leu Pro Ala Thr Val Glu Phe Ala Val His Thr Phe Asn Gln
                50                       55                      60

    Gln Ser Lys Asp Tyr Tyr Ala Tyr Arg Leu Gly His Ile Leu Asn
                65                       70                      75

    Ser Trp Lys Glu Gln Val Glu Ser Lys Thr Val Phe Ser Met Glu
                80                       85                      90

    Leu Leu Leu Gly Arg Thr Arg Cys Gly Lys Phe Glu Asp Asp Ile
                95                      100                     105

    Asp Asn Cys His Phe Gln Glu Ser Thr Glu Leu Asn Asn Thr Phe
               110                      115                     120

    Thr Cys Phe Phe Thr Ile Ser Thr Arg Pro Trp Met Thr Gln Phe
               125                      130                     135

    Ser Leu Leu Asn Lys Thr Cys Leu Glu Gly Phe His
               140                      145
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<400> 145
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gaccgatca ggaagtacct gagctggtgc tggctggcca ctgtctgcat 110

gcttctcttc agccatctct ctgcggtcca gacgagggc atcaagcaca 150

gaatcaagtg gaaccggaag gccctgccca gcactgccca gatcactgag 200

gccaggttg ctgagaaccg cccgggagcc ttcatcaagc aaggccgcaa 250

gctgacatt gacttggag ccgagggcaa caggtactac gaggccaact 300

actggcagtt ccccgttggc atccactaca acggctgctc tgaggctaat 340

gtgaccaagg aggcatttgt caccggctgc atcaatgcca cccaggcggc 400

gaaccagggg gagttaaga agccagacaa caagctccac cagcaggtgc 450

tctgcggct ggtccaggag ctctgctccc tcaagcattg cgagttttgg 500

ttggagaggg gcgcaggact tcgggtcacc atgcaccagc cagtgctcct 550

ctgccttctg acttttgatct ggctcatggt gaaataagct tgccaggagg 600

ctggcagtac agaggcgatc agcgagcaaa tcctggaag tgctggagt ...

cttctccac aaaccacagc gtgttctgaa ggtgcccagg agcggcgatg 700
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cactcgcact gcaaatgccg ctcccacgta tgcgccctgg tatgtgcctg 750

cgttctgata gatgggggac tgtggcttct ccgtcactcc attctcagcc 800

cctagcagag cgtctggcac actagattag tagtaaatgc ttgatgagaa 850

gaacacatca ggcactgcgc cacctgcttc acagtacttc ccaacaactc 900

ttagaggtag gtgtattccc gttttacaga taaggaaact gaggcccaga 950

gagctgaagt actgcaccca gcatcaccag ctagaaagtg gcagagccag 1000

gattcaaccc tggcttgtct aaccccaggt tttctgctct gtccaattcc 1050

agagctgtct ggtgatcact ttatgtctca cagggaccca catccaaaca 1100

tgtatctcta atgaaattgt gaaagctcca tgtttagaaa taaatgaaaa 1150

cacctga 1157

<210> 146
<211> 176
<212> PRT
<213> Homo Sapien

<400> 146
Met Arg Lys His Leu Ser Trp Trp Trp Leu Ala Thr Val Cys Met
1   5   10   15

Leu Leu Phe Ser His Leu Ser Ala Val Gln Thr Arg Gly Ile Lys
                20   25   30

His Arg Ile Lys Trp Asn Arg Lys Ala Leu Pro Ser Thr Ala Gln
                35   40   45

Ile Thr Glu Ala Gln Val Ala Glu Asn Arg Pro Gly Ala Phe Ile
                50   55   60

Lys Gln Gly Arg Lys Leu Asp Ile Asp Phe Gly Ala Glu Gly Asn
                65   70   75

Arg Tyr Tyr Glu Ala Asn Tyr Trp Gln Phe Pro Asp Gly Ile His
                80   85   90

Tyr Asn Gly Cys Ser Glu Ala Asn Val Thr Lys Glu Ala Phe Val
                95   100   105

Thr Gly Cys Ile Asn Ala Thr Gln Ala Ala Asn Gln Gly Glu Phe
                110   115   120

Gln Lys Pro Asp Asn Lys Leu His Gln Gln Val Leu Trp Arg Leu
                125   130   135

Val Gln Gly Leu Cys Ser Leu Lys His Cys Glu Phe Trp Leu Leu
                140   145   150

Arg Gly Ala Gly Leu Arg Val Thr Met His Gln Pro Val Leu Leu
                155   160   165

Cys Leu Leu Ala Leu Ile Trp Leu Met Val Lys
                170   175

<210> 147

180

<210> 333
<211> DNA
<213> Homo Sapien

<400> 147
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cagaagttct cttctcttct ggcctcctct ctgtcttctt tccctctttc 150

tcctattttt aattagtagc atctactcag agtcatgcaa gctggaaatc 200

tctcattttg cttgtcagtg gggtaggtca ctgagtctta gttttttattt 250

tttaaatttt caactttcag attcagggg tacatgtgaa ggtttgtttt 300

acgagtatat tgcatgatgc tgaggtttgg ggt 333

<210> 14
<211> 73
<212> PRT
<213> Homo Sapien

<400> 148
Met Phe Arg Ser Ser Leu Leu Phe Trp Pro Pro Leu Cys Leu Leu
 1   5   10   15

Ser Leu Phe Leu Leu Ile Leu Ile Ser Ser Ile Tyr Ser Glu Ser
            20   25   30

Tyr Lys Leu Glu Ile Phe His Phe Ala Cys Gln Trp Gly Arg Ser
            35   40   45

Leu Ser Leu Ser Phe Tyr Phe Leu Lys Phe Gln Leu Ser Asp Ser
            50   55   60

Arg Gly Thr Cys Glu Gly Leu Phe Tyr Glu Tyr Ile Ala
            65   70

<210> 149
<211> 1593
<212> DNA
<213> Homo Sapien

<400> 149
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acccatccc acctctctgg ctcttcctgt ttttactcct cctttttcatt 200

caaaactaaa gctacagctc caggagccca gcgccgggct gtgacccaag 250

ccgagcctgg aagaatgggg ttcctcggga ccggcacttg gattctggtg 300

ccggtatctc cgattccaac cttccccaaa ccccacttcc ggacttttt 350

atctctacat aatagacaat caagtgcaga aagacttttg aatgaacaga 400

ttgctgaagc agaagaagac aagatttaaaa aaacatatcc tccagaaaac 450

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gctccccact tgataataag ttgaatgtgg aagatgttga ttcaaccaag 600
aatcgaaaac tgatcgatga ttatgactct actaagagtg gattggatca 650
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aaagtaaagt tgtatgtaag ctgaaaaaaa aaaaaaaaa aaa 1893
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<400> 150

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 1                             10                        15

Pro Ile Gln Ala Phe Pro Lys Pro Gly Gly Ser Gln Asp Lys Ser
        20                    25                        30

Leu His Asn Arg Glu Leu Ser Ala Glu Arg Pro Leu Asn Glu Gln
            35                    40                        1

Ile Ala Glu Ala Glu Glu Asp Lys Ile Lys Lys Thr Tyr Pro Pro
                50                    55                    60

Glu Asn Lys Pro Gly Gln Ser Asn Tyr Ser Phe Val Asp Asn Leu
                65                    70                    75

Asn Leu Leu Lys Ala Ile Thr Glu Lys Glu Lys Ile Glu Lys Glu
            80                    85                    90

Arg Gln Ser Ile Arg Ser Ser Pro Leu Asp Asn Lys Leu Asn Val
            95                    100                   105

Glu Asp Val Asp Ser Thr Lys Asn Arg Lys Leu Ile Asp Asp Tyr
                110                   115                   120

Asp Ser Thr Lys Ser Gly Leu Asp His Lys Phe Gln Asp Asp Pro
                125                   130                   135

Asp Gly Leu His Gln Leu Asp Gly Thr Pro Leu Thr Ala Glu Asp
                140                   145                   150

Ile Val His Lys Ile Ala Ala Arg Ile Tyr Glu Glu Asn Asp Arg
            155                   160                   165

Ala Val Phe Asp Lys Ile Val Ser Lys Leu Leu Asn Leu Gly Leu
            170                   175                   180

Ile Thr Glu Ser Gln Ala His Thr Leu Glu Asp Glu Val Ala Glu
            185                   190                   195

Val Leu Gln Lys Leu Ile Ser Lys Glu Ala Asn Asn Tyr Glu Glu
            200                   205                   210

Asp Pro Asn Lys Pro Thr Ser Trp Thr Glu Asn Gln Ala Gly Lys
            215                   220                   225

Ile Pro Glu Lys Val Thr Pro Met Ala Ala Ile Gln Asp Gly Leu
            230                   235                   240

Ala Lys Gly Glu Asn Asp Glu Thr Val Ser Asn Thr Leu Thr Leu
            245                   250                   255

Thr Asn Gly Leu Glu Arg Arg Thr Lys Ser Tyr Ser Glu Asp Asn
            260                   265                   270

Phe Glu Glu Leu Gln Tyr Phe Pro Asn Phe Tyr Ala Leu Leu Lys
            275                   280                   285

Ser Ile Asp Ser Glu Lys Glu Ala Lys     Lys     Thr         
            290                   295                   300

Thr Ile Met Lys Thr Leu Ile Asp Phe Val Lys Met Met Val Lys
```

183

Tyr Gly Thr Ile Ser Pro Glu Glu Gly Val Ser Tyr Leu Glu Asn
320 325 330

Leu Asp Glu Met Ile Ala Leu Gln Thr Lys Asn Lys Leu Glu Lys
335 340 345

Asn Ala Thr Asp Asn Ile Ser Lys Leu Phe Pro Ala Pro Ser Glu
350 355 360

Lys Ser His Glu Glu Thr Asp Ser Thr Lys Glu Glu Ala Ala Lys
365 370 375

Met Glu Lys Glu Tyr Gly Ser Leu Lys Asp Ser Thr Lys Asp Asn
380 385 390

Asn Ser Asn Pro Gly Gly Lys Thr Asp Glu Pro Lys Gly Lys Thr
395 400 405

Glu Ala Tyr Leu Glu Ala Ile Arg Lys Asn Ile Glu Trp Leu Lys
410 415 420

Lys His Asp Lys Lys Gly Asn Lys Glu Asp Tyr Asp Leu Ser Lys
425 430 435

Met Arg Asp Phe Ile Asn Lys Gln Ala Asp Ala Tyr Val Glu Lys
440 445 450

Gly Ile Leu Asp Lys Glu Glu Ala Glu Ala Ile Lys Arg Ile Tyr
455 460 465

Ser Ser Leu

<210> 151
<211> 2598
<212> DNA
<213> Homo Sapien

<400> 151
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ggagggctgc atgcaggaa ggtcattaaa ggtgaagaga tcagcgtggt 200

cccaatcgg tggctggatg ccagcctgtc cccgtcatc ctgggtgtcc 250

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acactagagc cagtcaacat catggagctc tatcttggtg ccaaggaatc 350

caagagcttc accttctacc ggcgggacat ggggctcacc tccagcttcg 400

aatccgctac ctacccaggc tggttcctgt gcaaggtgcc tgaagccgat 450

cagcctatca aactaccca gcttccggag aatgatggt ggagtcacc 500

aatcacagac tttaattcc agcagtgtga ctaggcaac gtgccccca 550

gaactccctg ggcagagcca gctcgagtgg ggggtgagtg gaggagaccc 600

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cctatctctt ccctcatcat cttgttgtg gcatgaggag gtgctgatgt 1100

cagaagaaat ggctcgagct cagagataa aagataagta gggtatgctg 1150

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tattcccatg aaaaagtgct catgacata tgagaagacc tacttacaaa 1250

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gtaccaaagt tgtctttgtg accaatagaa tatggcagaa gtgatggcat 2300

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agaaactctg tgagataatc gatgtttgtt gtttttaagtt ggtcagtttt 2550

ggtctaactt gttatgcagc aatagataaa taatatgcag agaaagag 2598

<210> 152
<211> 155
<212> PRT
<213> Homo Sapien

<400> 152
Met Val Leu Ser Gly Ala Leu Cys Phe Arg Met Lys Asp Ser Ala
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Leu Lys Val Leu Tyr Leu His Asn Asn Gln Leu Leu Ala Gly Gly
                20   25   30

Leu His Ala Gly Lys Val Ile Lys Gly Glu Glu Ile Ser Val Val
            35   40   45

Pro Asn Arg Trp Leu Asp Ala Ser Leu Ser Pro Val Ile Leu Gly
                50   55   60

Val Gln Gly Gly Ser Gln Cys Leu Ser Cys Gly Val Gly Gln Glu
                65   70   75

Pro Thr Leu Thr Leu Glu Pro Val Asn Ile Met Glu Leu Tyr Leu
            80   85   90

Gly Ala Lys Glu Ser Lys Ser Phe Thr Phe Tyr Arg Arg Asp Met
                95   100   105

Gly Leu Thr Ser Ser Phe Glu Ser Ala Ala Tyr Pro Gly Trp Phe
                110   115   120

Leu Cys Thr Val Pro Glu Ala Asp Gln Pro Val Arg Leu Thr Gln
                125   130   135

Leu Pro Glu Asn Gly Gly Trp Asn Ala Pro Ile Thr Asp Phe Tyr
                140   145   150

Phe Gln Gln Cys Asp
                155

<210> 153
<211> 1152
<212> DNA
<213> Homo Sapien

186

<400> 153

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tgcaggaggt ggtgcccttc ctggccaggg tcagcaacag gctaagcaca 450

tctcatattg aaggtgatga cctgcatatc cagaggaatg tgcaaaagct 500

gaagcacaca gtgaaaaagc ttcgagagcg tggagagatc aaagcaattg 550

gagaacttga tttgctgttt atgtctctga gaaatgcctg catttcacca 600

gagccaaagct gaaaaatgaa taactaaccc cctttccctg ctagaaataa 650

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cgaaactcca tcatgatgcg tggattccaa atgaacccct gcgttagtta 750

caaaggaaac caatgccaat tttgtttata agaccagaag gtagatttc 800

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acagaaaaca atttattttt taaataattg tcttttttcca taaaaaagat 900

tacttccat ccctttaggg gaaaaaaccc ctaaatagct tcatgtttcc 950

ataatcagta cctttatatt ataaatgtat ttattattat tataagactg 1000

catttttatt aatatcatttt attaatatgg atttatttat agaaacatca 1050

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cc 1152

<210> 154
<211> 179
<212> PRT
<213> Homo Sapien

<400> 154
Met Ala Ala Leu Gln Lys Ser Val Ser Ser Phe Leu Met Gly Thr
1   5   10   15

Leu Ala Thr Ser Cys Leu Leu Leu Leu Ala Leu Leu Val Gln Gly
            20   25   30

Gly Ala Ala Ala Pro Ile Ser Ser His Cys Arg Leu Asp Lys Ser
            35   40   45

187

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Asn Phe Gln Gln Pro Tyr Ile Thr Asn Arg Thr Phe Met Leu Ala
                50              55                      60

Lys Glu Ala Ser Leu Ala Asp Asn Asn Thr Asp Val Arg Leu Ile
                65              70                      75

Gly Glu Lys Leu Phe His Gly Val Ser Met Ser Glu Arg Cys Tyr
                80              85                      90

Leu Met Lys Gln Val Leu Asn Phe Thr Leu Glu Glu Val Leu Phe
                95              100                     105

Pro Gln Ser Asp Arg Phe Gln Pro Tyr Met Gln Glu Val Val Pro
                110             115                     120

Phe Leu Ala Arg Leu Ser Asn Arg Leu Ser Thr Cys His Ile Glu
                125             130                     135

Gly Asp Asp Leu His Ile Gln Arg Asn Val Gln Lys Leu Lys Asp
                140             145                     150

Thr Val Lys Lys Leu Gly Glu Ser Gly Glu Ile Lys Ala Ile Gly
                155             160                     165

Glu Leu Asp Leu Leu Phe Met Ser Leu Arg Asn Ala Cys Ile
                170             175
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<210> 155
<211> 1320
<212> DNA
<213> Homo Sapien

<400> 155

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aggtagagga gcagagatgc tgctgagggt ggaggtaggc caagctgcca 200
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188

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tctagagcag caggatcccg ggacaggatg gggggctttg gggaaacct 950

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ttttggagg ccaccactcc tgtctcttcc tcttttccca tccctgcta 1100

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cttcatttaa aaatgaaaaa 1320

(400) 156

Met Arg Glu Arg Pro Arg Leu Gly Glu Asp Ser Ser Leu Ile Ser
1   5   10   15

Leu Phe Leu Gln Val Val Ala Phe Leu Ala Met Val Met Gly Thr
                    20   25   30

His Thr Tyr Ser His Trp Pro Ser Cys Cys Pro Ser Lys Gly Gln
                    35   40   45

Asp Thr Ser Glu Glu Leu Leu Arg Trp Ser Thr Val Pro Val Pro
                    50   55   60

Pro Leu Glu Pro Ala Arg Pro Asn Arg His Pro Glu Ser Cys Arg
                    65   70   75

Ala Ser Glu Asp Gly Pro Leu Asn Ser Arg Ala Ile Ser Pro Trp
                    80   85   90

Arg Tyr Glu Leu Asp Arg Asp Leu Asn Arg Leu Pro Gln Asp Leu
                    95   100   105

Tyr His Ala Arg Cys Leu Cys Pro His Cys Val Ser Leu Gln Thr
                    110   115   120

Gly Ser His Met Asp Pro Arg Gly Asn Ser Glu Leu Leu Tyr His
                    125   130   135

Asn Gln Thr Val Leu Tyr Arg Arg Pro Cys His Gly Glu Lys Gly
                    140   145   150

Thr His Lys Gly Tyr Cys Leu Glu Arg Arg Leu Tyr Arg Val Ser
                    155   160   165

189

Leu Ala Cys Val Cys Val Arg Pro Arg Val Met Gly
170   175

<210> 157
<211> 151
<212> DNA
<213> Homo Sapien

<400> 157

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gatgaatgta agctgggtac tccgggcaga tgccagcatc cgcttgttga   250
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tcgtgtgggt gcaattacac agaggccttc cagactcaga ccagacc ctc   350
tcgtggtaaa tggacatttt cctacatcgg cttccctgta gagctgaaca   400
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cataatgaaa tataaaaaaa agtgtgtcaa ggccggaagc ctgtggatc    550
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acaaccatcc ccctcggaaa cagatacatg gctcttatcc aacacagcac   650
tatcatgggg ttttctcagg tgtttgagcc acaccagaag aaacaaacgc   700
gagcttcagt ggtgcattcca gtgactgggg atagtgaagg ttctacggtg   750
cagctgactc catattttcc tacttgtggc agcgactgca tccgacataa   800
aggaacagtt gtgctctgcc cacaaacagg cgtcccttct cctctggata   850
acaacaaaag caagccggga ggctggctgc ctctcctcct gctgtctctg   900
ctggtggcca catgggtgct ggtggcaggg atctatctaa tgtggaggca   950
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tgttacttca ctgaatttct tcaaaaccat tgcagaagtg aggtcatcct   1100
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ttgccactca aaagaagcca gcagacaaag tcgtcttcct tctttccaat   1200
aacctttaca gtgtttagtc tttgttctgc ggaatacctc cttgtttcc   1250
cagtgagaac tctcaagacc tcttccaaat tgcctttaac ctttctgca  1 300
gtgatctaag aagccagatt catctgcaca aatacgtggt ggtctacttt  1350
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190

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gtaccacctc atgaaggatg ccactgcttt ctgtgaagaa cttctccatg 1450

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tgctgctcct tgtag 1515

<210> 158
<211> 562
<212> PRT
<213> Homo Sapien

<400> 158

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Met Ser Leu Val Leu Leu Ser Leu Ala Ala Leu Cys Arg Ser Ala
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Val Pro Arg Glu Pro Thr Val Gln Cys Gly Ser Glu Thr Gly Pro
            20                  25                  30

Ser Pro Gln Trp Met Leu Gln His Asp Leu Ile Pro Gly Asp Leu
            35                  40                  45

Arg Asp Leu Arg Val Glu Pro Val Thr Thr Ser Val Ala Thr Gly
            50                  55                  60

Asp Tyr Ser Ile Leu Met Asn Val Ser Trp Val Leu Arg Ala Asp
            65                  70                  75

Ala Ser Ile Arg Leu Leu Lys Ala Thr Lys Ile Cys Val Thr Gly
            80                  85                  90

Lys Ser Asn Phe Gln Ser Tyr Ser Cys Val Arg Cys Asn Tyr Thr
            95                  100                 105

Glu Ala Phe Gln Thr Gln Thr Arg Pro Ser Gly Gly Lys Trp Thr
            110                 115                 120

Phe Ser Tyr Ile Gly Phe Pro Val Glu Leu Asn Thr Val Tyr Phe
            125                 130                 135

Ile Gly Ala His Asn Ile Pro Asn Ala Asn Met Asn Glu Asp Gly
            140                 145                 150

Pro Ser Met Ser Val Asn Phe Thr Ser Pro Gly Cys Leu Asp His
            155                 160                 165

Ile Met Lys Tyr Lys Lys Lys Cys Val Lys Ala Gly Ser Leu Trp
            170                 175                 180

Asp Pro Asn Ile Thr Ala Cys Lys Lys Asn Glu Glu Thr Val Glu
            185                 190                 195

Val Asn Phe Thr Thr Thr Pro Leu Gly Asn Arg Tyr Met Ala Leu
            200                 205                 210

Ile Gln His Ser Thr Ile Ile Gly Phe Ser Gln Val Phe Glu Pro
            215                 220                 225

His Gln Lys Lys Gln Thr Arg Ala Ser Val Val Ile Pro Val Thr
            230                 235                 240
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191

Gly Asp Ser Glu Gly Ala Thr Val Gln Leu Thr Pro Tyr Phe Pro
              245   250   255

Thr Cys Gly Ser Asp Cys Ile Arg His Lys Gly Thr Val Val Leu
              260   265   270

Cys Pro Gln Thr Gly Val Pro Phe Pro Leu Asp Asn Asn Lys Ser
              275   280   285

Lys Pro Gly Gly Tyr Leu Pro Leu Leu Leu Leu Ser Leu Leu Val
              290   295   300

Ala Thr Trp Val Leu Val Ala Gly Ile Tyr Leu Met Trp Arg His
              305   310   315

Glu Arg Ile Lys Lys Thr Ser Phe Ser Thr Thr Thr Leu Leu Pro
              320   325   330

Pro Ile Lys Val Leu Val Val Tyr Pro Ser Glu Ile Cys Phe His
              335   340   345

His Thr Ile Cys Tyr Phe Thr Glu Phe Leu Gln Asn His Cys Arg
              350   355   360

Ser Glu Val Ile Leu Glu Lys Trp Gln Lys Lys Lys Ile Ala Glu
              365   370   375

Met Gly Pro Val Gln Trp Leu Ala Thr Gln Lys Lys Ala Ala Asp
              380   385   390

Lys Val Val Phe Leu Leu Ser Asn Asp Val Asn Ser Val Cys Asp
              395   400   405

Gly Thr Cys Gly Lys Ser Glu Gly Ser Trp Ser Glu Asn Ser Gln
              410   415   420

Asp Leu Phe Pro Leu Ala Phe Asn Leu Ile Cys Ser Asp Leu Arg
              425   430   435

Ser Gln Ile His Leu His Lys Tyr Val Val Val Tyr Phe Arg Glu
              440   445   450

Ile Asp Thr Lys Asp Asp Tyr Asn Ala Leu Ser Val Cys Pro Lys
              455   460   465

Tyr His Leu Met Lys Asp Ala Thr Ala Phe Cys Ala Glu Leu Leu
              470   475   480

His Val Lys Gln Gln Val Ser Ala Gly Lys Arg Ser Gln Ala Cys
              485   490   495

His Asp Gly Cys Lys Ser Leu
              500

cagctcagaa aatcccaaa gtaggacata ctttttcca aaagcctgag 150

agttgcagc ctgtgccagg aggtagtatg aagcttgaca ttggcatcat 200

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cctccctctg gaattacact gtcacttggg accccaaccg gtacccctcg 300

gaagttttac aggcccagtg taggaacttg ggctgcatca atgctcaagg 350

aaaggaagac atctccatga attccgttcc catccagcaa gagaccctgg 400

tcgtccggag gaagcaccaa ggctgctctg tttctttcca gttggagaag 450

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<210> 146
<211> 163
<212> PRT
<213> Homo Sapien

<400> 160
    Met Thr Val Lys Thr Leu His Gly Pro Ala Met Val Lys Tyr Leu
    1   5   10   15

    Leu Leu Ser Ile Leu Gly Leu Ala Thr Leu Ser Glu Ala Ala Ala
                        20   25   30

    Arg Lys Ile Pro Lys Val Gly His Thr Phe Phe Gln Lys Pro Glu
                        35   40   45

    Ser Cys Pro Pro Val Pro Gly Gly Ser Met Lys Leu Asp Ile Gly
                        50   55   60

    Ile Leu Asn Glu Asn Gln Arg Val Ser Met Ser Arg Asn Ile Gln
                        65   70   75

    Ser Arg Ser Thr Ser Pro Trp Asn Tyr Thr Val Thr Trp Asp Pro
                        80   85   90

    Asn Arg Tyr Pro Ser Glu Val Val Gln Ala Gln Cys Arg Asn Leu
                        95   100   105

    Gly Cys Ile Asn Ala Gln Gly Lys Glu Asp Ile Ser Met Asn Ser
                        110   115   120

    Val Pro Ile Gln Gln Glu Thr Leu Val Val Arg Arg Lys His Gln
                        125   130   135

    Gly Cys Ser Val Ser Phe Gln Leu Glu Lys Val Leu Val Thr Val
                        140   145   150

    Gly Cys Thr Cys Val Thr Pro Val Ile His His Val Gln
                        155   160

<210> 161
<211> 2380
<212> DNA
<213> Homo Sapien

<400> 161

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cacgggctga ctggcgtgtc tgccccctt ggggggtgggc agcacaggtc 200

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gcttgtgggg cctcaggacg ctaccactg ctctccgggc ctctcctgcc 350

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ccaagtcgtg ctctccttcc aggcctaccc tactgccccgc tgcgtcctgc 650

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tgtattcagg tgtagccctct ggaacctgac tccgctcagga cgaacacttg 1050

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gactgcgact gcttaccctg cagagctggc tgctggagc acggtgctcg 1150

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aacagctcgg agatgctgca gctgcaggag tgcttgtggg ctgactcct 1350

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ncacccagac gcgtaccg cccttttccg cacgcgtgcc gtcttcacac 2150

tgccctcca actgccagac ttcctggggg ccctgcagca gcctcgcgcc 2200

cgcgttccg ggcggctnca agagagacg gagcaagtgt cccgggccct 2250

tcagccagcc ctggatagct acttccatcc ccgggggact cccgcgccgg 2300

nacgcgnngt gggaccaggg gcgggacctg ggcgcggggga cgggacttaa 23

ataaagncag acgctgtttt tctaaaaaaa 2380

210 162
211 794
212 PRT
213 Homo Sapien

400 162
Met Pro Val Pro Trp Phe Leu Leu Ser Leu Ala Leu Gly Arg Ser
 1   5   10   15

Pro Val Val Leu Ser Leu Glu Arg Leu Val Gly Pro Gln Asp Ala
            20   25   30

Thr His Cys Ser Pro Gly Leu Ser Cys Arg Leu Trp Asp Ser Asp
            35   40   45

Ile Leu Cys Leu Pro Gly Asp Ile Val Pro Ala Pro Gly Pro Val
            50   55   60

Leu Ala Pro Thr His Leu Gln Thr Glu Leu Val Leu Arg Cys Gln
            65   70   75

Lys Glu Thr Asp Cys Asp Leu Cys Leu Arg Val Ala Val His Leu
            80   85   90

Arg Val His Gly His Trp Glu Glu Pro Glu Asp Glu Ile Lys Thr
            95   100   105

Gly Gly Ala Ala Asp Ser Gly Val Glu Glu Pro Arg Asn Ala Ser
            110   115   120

195

Leu Gln Ala Gln Val Val Leu Ser Phe Gln Ala Tyr Pro Thr Ala
    125   130   135

Arg Cys Val Leu Leu Glu Val Gln Val Pro Ala Ala Leu Val Gln
    110   145   150

Phe Gly Gln Ser Val Gly Ser Val Val Tyr Asp Cys Phe Glu Ala
    155   160   165

Ala Leu Gly Ser Glu Val Arg Ile Trp Ser Tyr Thr Gln Pro Arg
    170   175   180

Tyr Glu Lys Glu Leu Asn His Thr Gln Gln Leu Pro Ala Leu Pro
    185   190   195

Trp Leu Asn Val Ser Ala Asp Gly Asp Asn Val His Leu Val Leu
    200   205   210

Asn Val Ser Glu Gln Gln His Phe Gly Leu Ser Leu Tyr Trp Asn
    215   220   225

Gln Val Gln Gly Pro Pro Lys Pro Arg Trp His Lys Asn Leu Thr
    230   235   240

Gly Pro Gln Ile Ile Thr Leu Asn His Thr Asp Leu Val Pro Cys
    245   250   255

Leu Cys Ile Gln Val Trp Pro Leu Glu Pro Asp Ser Val Arg Thr
    260   265   270

Asn Ile Cys Pro Phe Arg Glu Asp Pro Arg Ala His Gln Asn Leu
    275   280   285

Trp Gln Ala Ala Arg Leu Arg Leu Leu Thr Leu Gln Ser Trp Leu
    290   295   300

Leu Asp Ala Pro Lys Ser Leu Pro Ala Gln Ala Ala Leu Cys Trp
    305   310   315

Arg Ala Pro Gly Gly Asp Pro Cys Gln Pro Leu Val Pro Pro Leu
    320   325   330

Ser Trp Glu Asn Val Thr Val Asp Lys Val Leu Glu Phe Pro Leu
    335   340   345

Leu Lys Gly His Pro Asn Leu Cys Val Gln Val Asn Ser Ser Glu
    350   355   360

Lys Leu Gln Leu Gln Glu Cys Leu Trp Ala Asp Ser Leu Gly Pro
    365   370   375

Leu Lys Asp Asp Val Leu Leu Leu Glu Thr Arg Gly Pro Gln Asp
    380   385   390

Asn Arg Ser Leu Lys Ala Leu Glu Pro Arg Gly Cys Thr Ser Leu
    395   400   405

Pro Ser Lys Ala Ser Thr Arg Ala Ala Arg Pro Gly His Tyr Pro
    410   415   420

Leu Gln Asp Leu Gln Ser Gly Gln Cys Leu Gln Leu Trp Asp Asp
    425   430   435

Asp Leu Gly Ala Leu Trp Ala Cys Pro Met Asp Lys Tyr Ile His
440 445 450

Lys Arg Trp Ala Leu Val Trp Leu Ala Cys Leu Leu Phe Ala Ala
455 460 465

Ala Leu Ser Leu Ile Leu Leu Leu Lys Lys Asp His Ala Lys Gly
470 475 480

Trp Leu Arg Leu Leu Lys Gln Asp Val Arg Ser Gly Ala Ala Ala
485 490 495

Arg Gly Arg Ala Ala Leu Leu Leu Tyr Ser Ala Asp Asp Ser Gly
500 505 510

Phe Glu Arg Leu Val Gly Ala Leu Ala Ser Ala Leu Cys Gln Leu
515 520 525

Pro Leu Arg Val Ala Val Asp Leu Trp Ser Arg Arg Glu Leu Ser
530 535 540

Ala Gln Gly Pro Val Ala Trp Phe His Ala Gln Arg Arg Gln Thr
545 550 555

Leu Gln Glu Gly Gly Val Val Val Leu Leu Phe Ser Pro Gly Ala
560 565 570

Val Ala Leu Cys Ser Glu Trp Leu Gln Asp Gly Val Ser Gly Pro
575 580 585

Gly Ala His Gly Pro His Asp Ala Phe Arg Ala Ser Leu Ser Cys
590 595 600

Val Leu Pro Asp Ile Leu Gln Gly Arg Ala Pro Gly Ser Tyr Val
605 610 615

Gly Ala Cys Phe Asp Arg Leu Leu His Pro Asp Ala Val Pro Ala
620 625 630

Leu Phe Arg Thr Val Pro Val Phe Thr Leu Pro Ser Gln Leu Pro
635 640 645

Asp Phe Leu Gly Ala Leu Gln Gln Pro Arg Ala Pro Arg Ser Gly
650 655 660

Arg Leu Gln Glu Arg Ala Glu Gln Val Thr Arg Ala Leu Gln Pro
665 670 675

Ala Leu Asp Ser Tyr Phe His Pro Pro Gly Thr Pro Ala Pro Gly
680 685 690

Arg Gly Val Gly Pro Gly Ala Gly Pro Gly Ala Gly Asp Gly Thr
695 700 705

<210> 163
<211> 2478
<212> DNA
<213> Homo sapiens

<400> 163
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ggcgatggcc acggctaac cctggaagac atcttccatg acctgttcta 200

ctacttagag ctccaggtca acggcaccta ccaaatgcac cttgtaggga 250

agcagagaga atatgagttc ttcggcctga cccctgacac agagttcctt 300

ggcaccatca tgatttgcgt tcccacctgg gccaaggaga gtgcccccta 350

catgtgccga gtgaagacac tgccagaccg gacatggacc tactccttct 400

ccggagcctt cctgttctcc atgggcttcc tgtcgccagt actgtgctac 450

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tccacagcgg catagcctgt ccgacatcac ctacttagtg cagccagaca 700

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ctgtcctatg cccaaacgc tgcccctgag gtcggccct catcctatgc 800

acctcaggtg acccccgaag ctcaattccc attctacgtc ccacagccca 850

tccctaagt ccagccttcc tcctatgccc ctcaacccc tccggaage 900

tggcctccct cctatgggct atgcatggaa ggttcttggaa aagactcccc 950

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gaggtgacct cctggctat gcaggaatcc caagaaagaa aatcattgca 1100

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ctctcctcag tccagatcga gggccaccc atgtcctcc cttttcaacc 1250

tccttccagt ccatgttccc cctcgggacca aggtccaagt ccctggggcc 1300

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gagacctcag acctggagca gcccacagaa ctggattctc ttttcagagg 1400

cctggccctg actgtgcagt gggagtccg aggggaatgg gaaaggctty 1450

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198

gagcagcttg tgtagacaag cgcgtgctcg ctgagccctg caaggcagaa 1700

atgacagtgc aaggaggaaa tgcagggaaa ctcccgaggt ccagagcccc 1750

acctcctaac accatggatt caaagtgctc agggaatttg cctctccttg 1800

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atgcctggaa aagaaccaga aggaggctgg gcagaaccag aacaacctgc 1950

acttctgcca aggccagggc cagcaggacg gcaggactct agggagggt 2000

gtgggctgca gctcattccc agccagggca actgcctgac gttgcacgat 2050

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aaaggctagc tatttaaaaa aaaaaaaa 2473

(400) 164

Met Arg Thr Leu Leu Thr Ile Leu Thr Val Gly Ser Leu Ala Ala
1   5   10   15

His Ala Pro Glu Asp Pro Ser Asp Leu Leu Gln His Val Lys Phe
                20   25   30

Gln Ser Ser Asn Phe Glu Asn Ile Leu Thr Trp Asp Ser Gly Pro
                35   40   45

Glu Gly Thr Pro Asp Thr Val Tyr Ser Ile Glu Tyr Lys Thr Tyr
                50   55   60

Gly Glu Arg Asp Trp Val Ala Lys Lys Gly Cys Gln Arg Ile Thr
                65   70   75

Arg Lys Ser Cys Asn Leu Thr Val Glu Thr Gly Asn Leu Thr Glu
                80   85   90

Leu Tyr Tyr Ala Arg Val Thr Ala Val Ser Ala Gly Gly Arg Ser
                95   100   105

Ala Thr Lys Met Thr Asp Arg Phe Ser Ser Leu Gln His Thr Thr

199

Leu Lys Pro Pro Asp Val Thr Cys Ile Ser Lys Val Arg Ser Ile
     125   130   135

Gln Met Ile Val His Pro Thr Pro Thr Pro Ile Arg Ala Gly Asp
     140   145   150

Gly His Arg Leu Thr Leu Glu Asp Ile Phe His Asp Leu Phe Tyr
     155   160   165

His Leu Glu Leu Gln Val Asn Arg Thr Tyr Gln Met His Leu Gly
     170   175   180

Gly Lys Gln Arg Glu Tyr Glu Phe Phe Gly Leu Thr Pro Asp Thr
     185   190   195

Glu Phe Leu Gly Thr Ile Met Ile Cys Val Pro Thr Trp Ala Lys
     200   205   210

Glu Ser Ala Pro Tyr Met Cys Arg Val Lys Thr Leu Pro Asp Arg
     215   220   225

Thr Trp Thr Tyr Ser Phe Ser Gly Ala Ile Leu Phe Ser Met Gly
     230   235   240

Phe Leu Val Ala Val Leu Cys Tyr Leu Ser Tyr Arg Tyr Val Thr
     245   250   255

Lys Pro Pro Ala Trp Pro Asn Ser Leu Asn Val Gln Arg Val Leu
     260   265   270

Thr Phe Gln Pro Leu Arg Phe Ile Gln Gln His Val Leu Ile Pro
     275   280   285

Val Phe Asp Leu Ser Gly Pro Ser Ser Leu Ala Gln Pro Val Gln
     290   295   300

Tyr Ser Gln Ile Arg Val Ser Gly Pro Arg Glu Pro Ala Gly Ala
     305   310   315

Pro Gln Arg His Ser Leu Ser Glu Ile Thr Tyr Leu Gly Gln Pro
     320   325   330

Asp Ile Ser Ile Leu Gln Pro Ser Asn Val Pro Pro Pro Gln Ile
     335   340   345

Leu Ser Pro Leu Ser Tyr Ala Pro Asn Ala Ala Pro Glu Val Gly
     350   355   360

Pro Pro Ser Tyr Ala Pro Gln Val Thr Pro Glu Ala Gln Phe Pro
     365   370   375

Phe Tyr Ala Pro Gln Ala Ile Ser Lys Val Gln Pro Ser Ser Tyr
     380   385   390

Ala Pro Gln Ala Thr Pro Asp Ser Trp Pro Pro Ser Tyr Gly Val
     395   400   405

Cys Met Glu Gly Ser Gly Lys Asp Ser Pro Thr Gly Thr Leu Ser
     410   415   420

Ser Pro Lys His Leu Arg Pro Lys Gly Gln Leu Gln Lys Glu Pro

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Pro Ala Gly Ser Cys Met Leu Gly Gly Leu Ser Leu Gln Glu Val
        440                 445                 450

Thr Ser Leu Ala Met Glu Glu Ser Gln Glu Ala Lys Ser Leu His
        455                 460                 465

Gln Pro Leu Gly Ile Cys Thr Asp Arg Thr Ser Asp Pro Asn Val
        470                 475                 480

Leu His Ser Gly Glu Glu Gly Thr Pro Gln Tyr Leu Lys Gly Gln
        485                 490                 495

Leu Pro Leu Leu Ser Ser Val Gln Ile Glu Gly His Pro Met Ser
        500                 505                 510

Leu Pro Leu Gln Pro Pro Ser Gly Pro Cys Ser Pro Ser Asp Gln
        515                 520                 525

Gly Pro Ser Pro Trp Gly Leu Leu Glu Ser Leu Val Cys Pro Lys
        530                 535                 540

Asp Glu Ala Lys Ser Pro Ala Pro Glu Thr Ser Asp Leu Glu Gln
        545                 550                 555

Pro Thr Glu Leu Asp Ser Leu Phe Arg Gly Leu Ala Leu Thr Val
        560                 565                 570

Gln Trp Glu Ser
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<210> 165
<211> 1160
<212> DNA
<213> Homo Sapien

<400> 165
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tgtaccgtgg gaaagttctt gaagacttca cgggcctga ttgtcgtttt    250
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gggatccctt gaactttggg ctggaagtgt tgaacacagt tttggatatt   350
ttccaaaaga tttgatcaag gtacttcata aatacacgga agaagagcta   400
catattccag cagatgtgac agactttgtc tgcttgaag gaggaagaga     450
tgattttaat agttataatg tagaagacct tttaggatct ttggaactgg    500
aggactgtgt aatggagaag tggaaggagt aggagaggg gctgaaggag     550
acagagaaat ctcctgagga gtctggggg cgtgaacttg agcctgtgc     600
tgagcccgag gcattcagag ctgattcaga ggatgaagaa ggtgctttct   650
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ggacactttt gaagaaattc tgcacgataa attgaaagtg cgggaagcg 800

aaagcagaac tggcaattgt tctcctgcct cggtggagcg ggagaagaca 850

gatgcttaca aagtcctgaa aacagaaatg agtcajagag gaagtggaca 900

gtgcgttatt cattacagca aaggatttcg ttggcatcaa aatctaagtt 950

tgttttacaa agattgtttt tagtactaag ctgcccttggc agtttgcatt 1000

tttgagccaa acaaaaatat attattttcc cttctaagta aaaaaaaaaa 1050

aaaaaaaaaa 1060

<210> 166
<211> 303
<212> PRT
<213> Homo Sapien

<400> 166
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Met Ala Ala Ala Pro Gly Leu Leu Phe Trp Leu Phe Val Leu Gly
1               5                   10                  15

Ala Leu Trp Trp Val Pro Gly Gln Ser Asp Leu Ser His Gly Arg
                20                  25                  30

Arg Phe Ser Asp Leu Lys Val Cys Gly Asp Glu Glu Cys Ser Met
                35                  40                  45

Leu Met Tyr Arg Gly Lys Ala Leu Glu Asp Phe Thr Gly Pro Asp
                50                  55                  60

Lys Arg Phe Val Asn Phe Lys Lys Gly Arg Asp Val Tyr Val Tyr
                65                  70                  75

Tyr Lys Leu Ala Gly Gly Ser Leu Glu Leu Trp Ala Gly Ser Val
                80                  85                  90

Glu His Ser Phe Gly Tyr Phe Pro Lys Asp Leu Ile Lys Val Leu
                95                  100                 105

His Lys Tyr Thr Glu Glu Glu Leu His Ile Pro Ala Asp Glu Thr
                110                 115                 120

Asp Phe Val Cys Phe Glu Gly Gly Arg Asp Asp Phe Asn Ser Tyr
                125                 130                 135

Asn Val Glu Glu Leu Leu Gly Ser Leu Glu Leu Glu Asp Ser Val
                140                 145                 150

Pro Glu Glu Ser Lys Lys Ala Glu Glu Val Ser Gln His Arg Glu
                155                 160                 165

Lys Ser Trp Glu Glu Ser Arg Gly Phe Glu Leu Asp Phe Val Trp
                170                 175                 180

Glu Pro Glu Ala Phe Arg Ala Asp Ser Glu Asp Gly Glu Gly Ala
                185                 190                 195
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202

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Phe Ser Glu Ser Thr Glu Gly Leu Gln Gly Gln Pro Ser Ala Gln
                200             205             210

Glu Ser His Pro His Thr Ser Gly Pro Ala Ala Asn Ala Gln Gly
            215             220             225

Val Gln Ser Ser Leu Asp Thr Phe Glu Glu Ile Leu His Asp Lys
        230             235             240

Leu Lys Val Pro Gly Ser Glu Ser Arg Thr Gly Asn Ser Ser Pro
    245             250             255

Ala Ser Val Glu Arg Glu Lys Thr Asp Ala Tyr Lys Val Leu Lys
    260             265             270

Thr Glu Met Ser Gln Arg Gly Ser Gly Gln Cys Val Ile His Tyr
        275             280             285

Ser Lys Gly Phe Arg Trp His Gln Asn Leu Ser Leu Phe Tyr Lys
        290             295             300

Asp Cys Phe
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(400) 167

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(211) 273
(212) PRT
(213) Homo Sapien

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Lys Phe Ala Asp Phe Lys His Pro Cys Tyr Lys Met Ala Tyr Phe
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His Glu Leu Ser Ser Arg Val Ser Phe Gln Glu Ala Arg Leu Ala
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Cys Glu Ser Glu Gly Gly Val Leu Leu Ser Leu Glu Asn Glu Ala
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Glu Gln Lys Leu Ile Glu Ser Met Leu Gln Asn Leu Thr Lys Pro
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Gly Thr Gly Ile Ser Asp Gly Asp Phe Trp Ile Gly Leu Trp Arg
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Asn Gly Asp Gly Gln Thr Ser Gly Ala Cys Pro Asp Leu Tyr Gln
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Trp Ser Asp Gly Ser Asn Ser Gln Tyr Arg Asn Trp Tyr Thr Asp
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Glu Pro Ser Cys Gly Ser Glu Lys Cys Val Val Met Tyr His Gln
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Pro Thr Ala Asn Pro Gly Leu Gly Gly Pro Tyr Leu Tyr Gln Trp
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Asn Asp Asp Arg Cys Asn Met Lys His Asn Tyr Ile Cys Lys Tyr
                1.5                 165                 1.0

Glu Pro Glu Ile Asn Pro Thr Ala Pro Val Glu Lys Pro Tyr Leu
                1.5                 1.0                 1.5

Thr Asn Gln Pro Gly Asp Thr His Gln Asn Val Val Val Thr Glu
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Ala Gly Ile Ile Pro Asn Leu Ile Tyr Val Val Ile Pro Thr Ile
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Pro Leu Leu Leu Leu Ile Leu Val Ala Phe Gly Thr Cys Cys Thr
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205

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